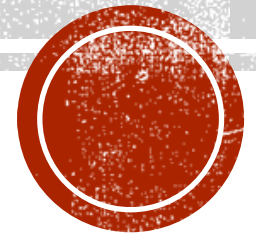




19TH ANNUAL

Keyes Peak Ski Lodge, April 17, 2024



Wood Markets Update

Scott Bowe

19th Annual Sustainable Forestry Conference

Florence, WI

April 17, 2024

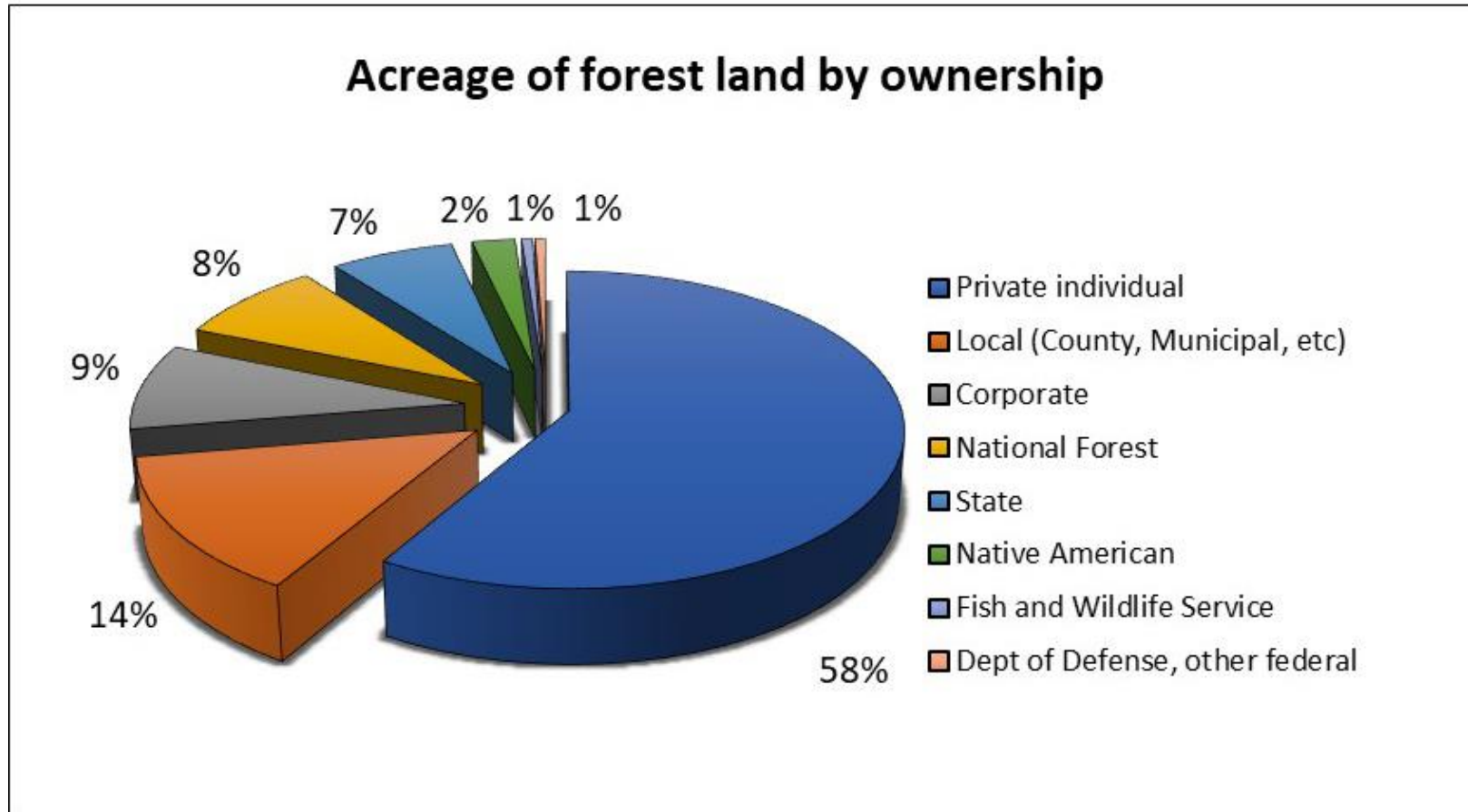


Outline

- Brief Review of Wisconsin's Forests
- Brief Update on Housing
- Softwood Lumber Markets
- Hardwood Lumber Markets
 - Domestic
 - China
 - Where are New Opportunities?
 - Update on EUDR
- Brief Comments on Pulp & Paper Markets
- Closing Remarks

Brief Review of Wisconsin's Forests

Forest Ownership in Wisconsin



Source: 2021 WI DNR

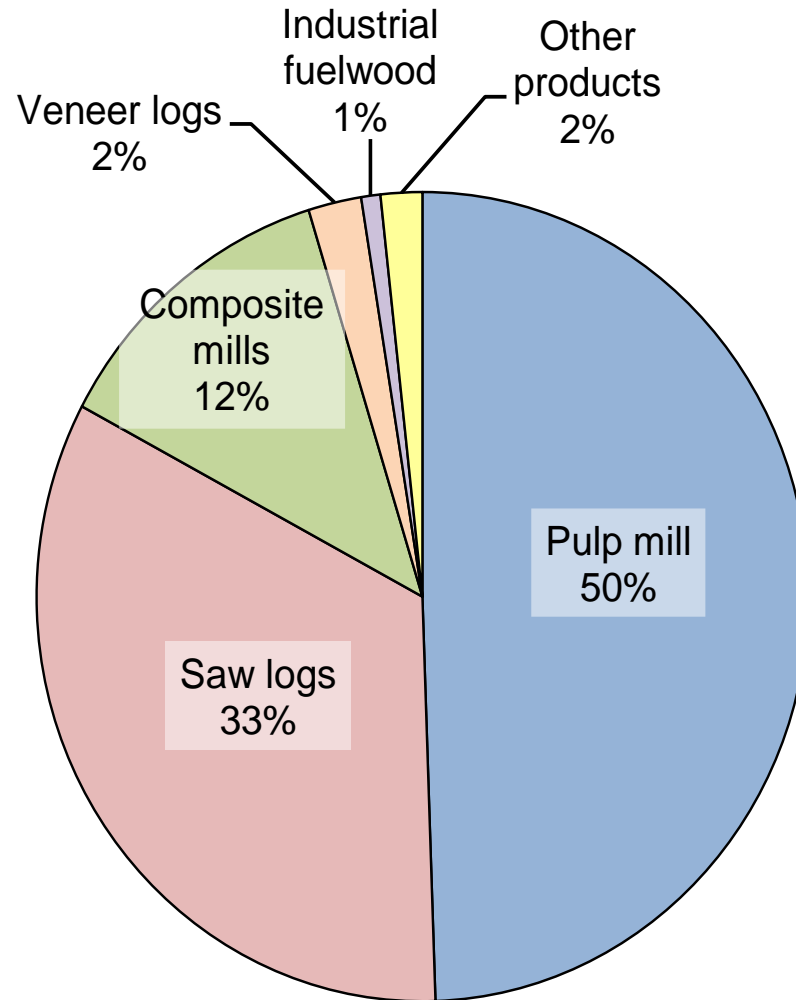
Forest Harvests by Ownership

Ownership category	Minnesota		Wisconsin	
	2016	2021	2016	2021
Non Industrial Private Forest (NIPF)	20%	37%	52%	66%
Industrial	15%	3%	4%	5%
National	7%	4%	6%	3%
State	27%	29%	10%	6%
County/Municipal	30%	25%	27%	18%
Tribal	1%	2%	1%	1%

(Source: 2022 WI Loggers Study)



Raw Material Use in WI



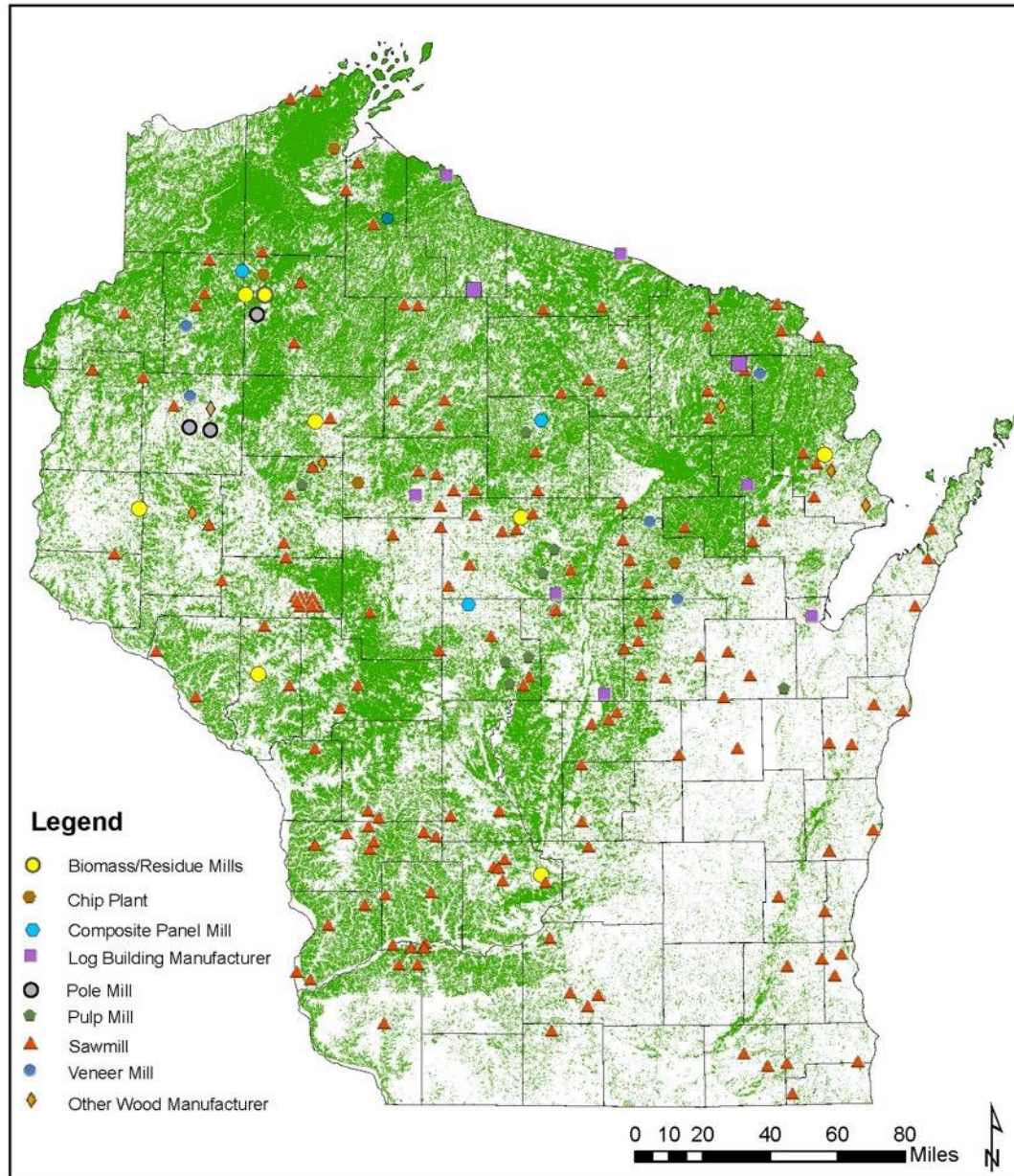
(Source: WI Timber Products Output, 2018)

Forest Products Industry Listings

Preparation Date: 05/22/2020

Prepared By: Forest Products Services (FPS) Staff

Data Taken from 2019 Timber Products Output (TPO) Survey

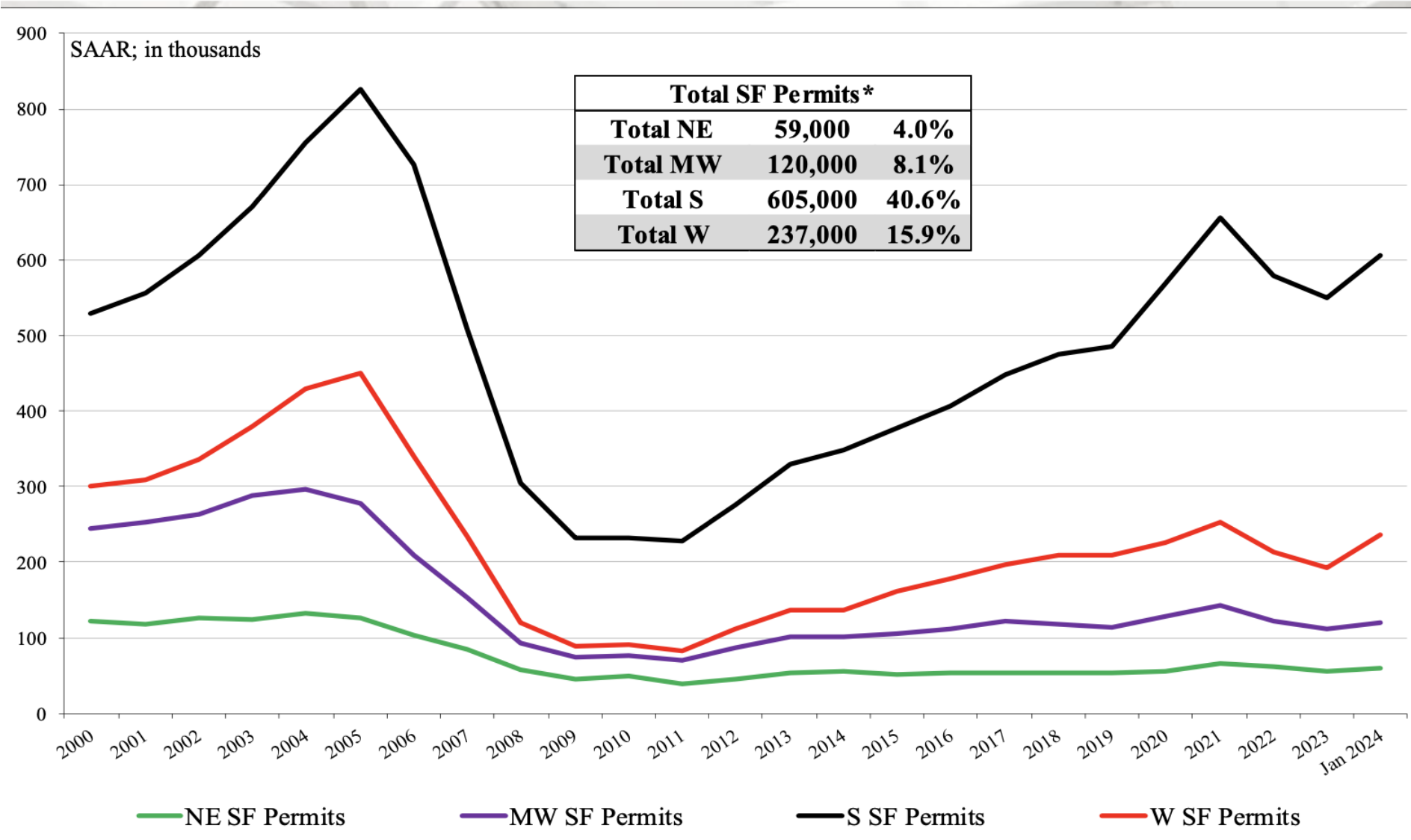


Brief Updated on Housing

US Housing

- New construction is the driver for the softwood/hardwood markets – and remodeling for hardwoods.
- Existing home sales will have a tough time gaining real momentum in a limited inventory environment where **most homeowners are rate-locked** into their homes – you can't buy what is not for sale.
- A higher mortgage rate environment resulting in a bifurcated market – the haves and have nots. The former are the ones building and buying.
- 77% of agents report that buyers outnumber sellers - reignited bidding wars for the limited supply of homes.
- Millennials will drive 12.7 new households in the 2020s, ~17.1 million new homes will be needed during the decade to meet demand and make up for the current shortage of 1.7 million homes.

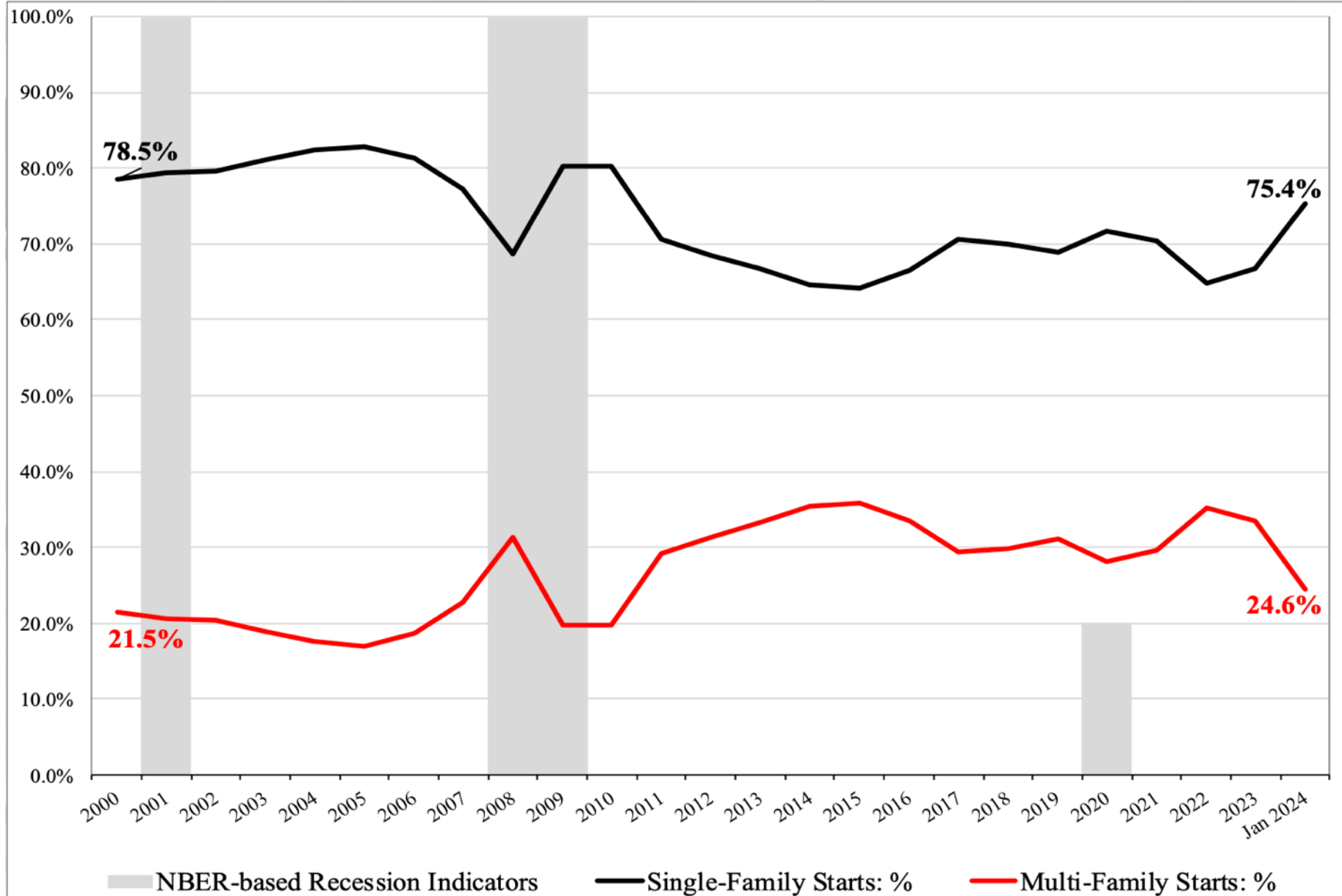
SF Housing Permits by Region



NE = Northeast, MW = Midwest, S = South, W = West

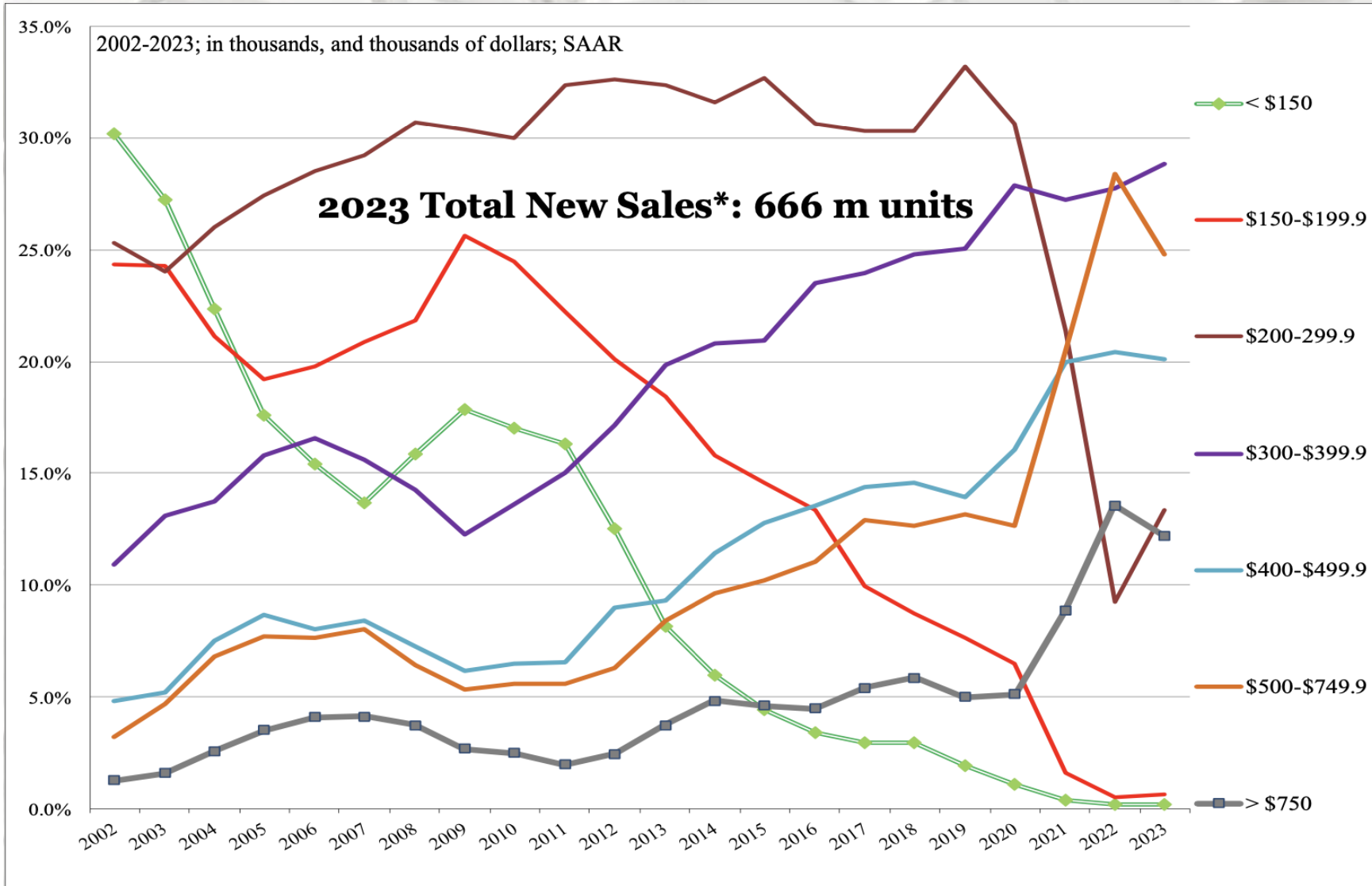
* Percentage of total permits.

SF vs. MF Housing Starts (%)



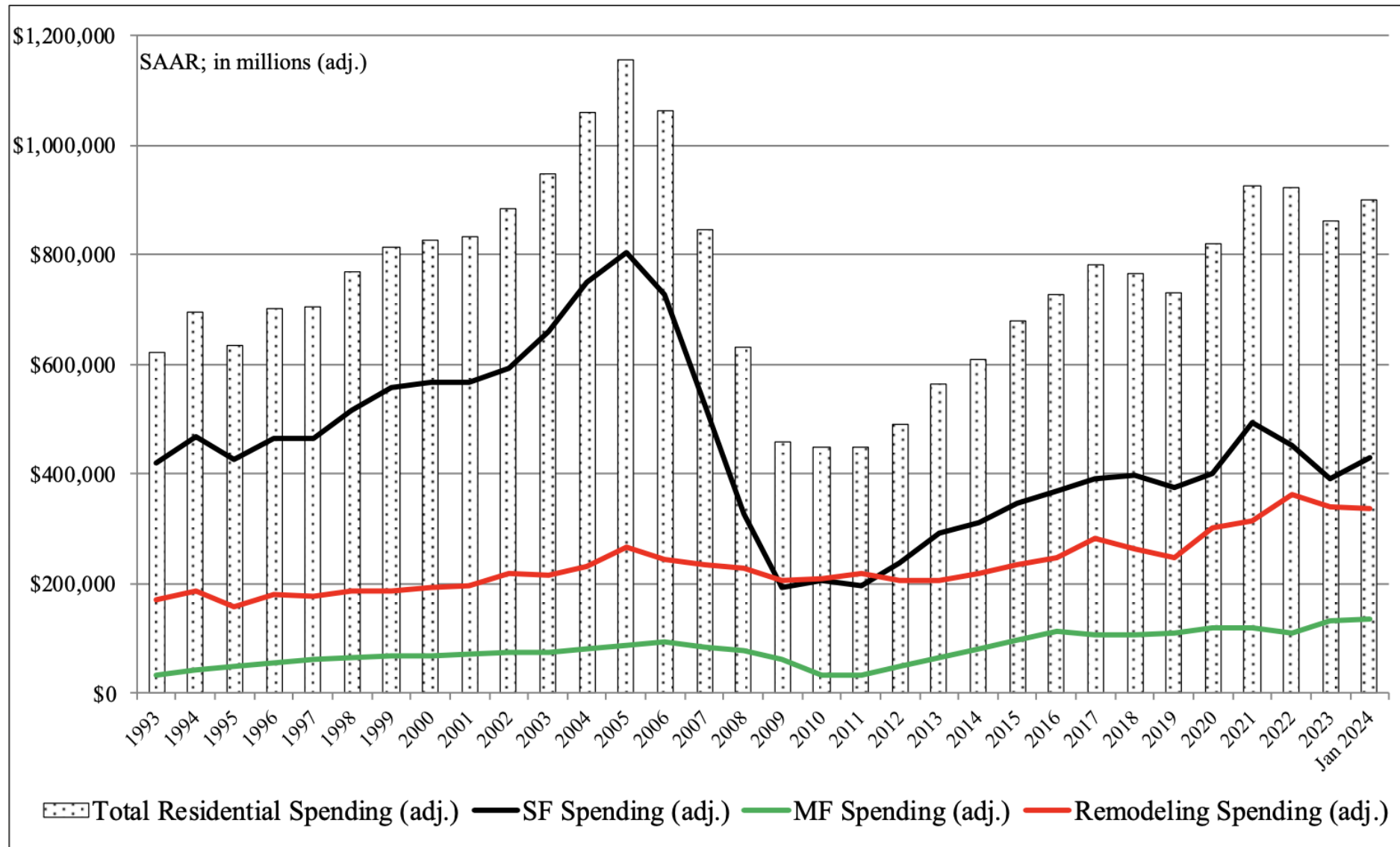
NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

New SF House Sales by Price Category



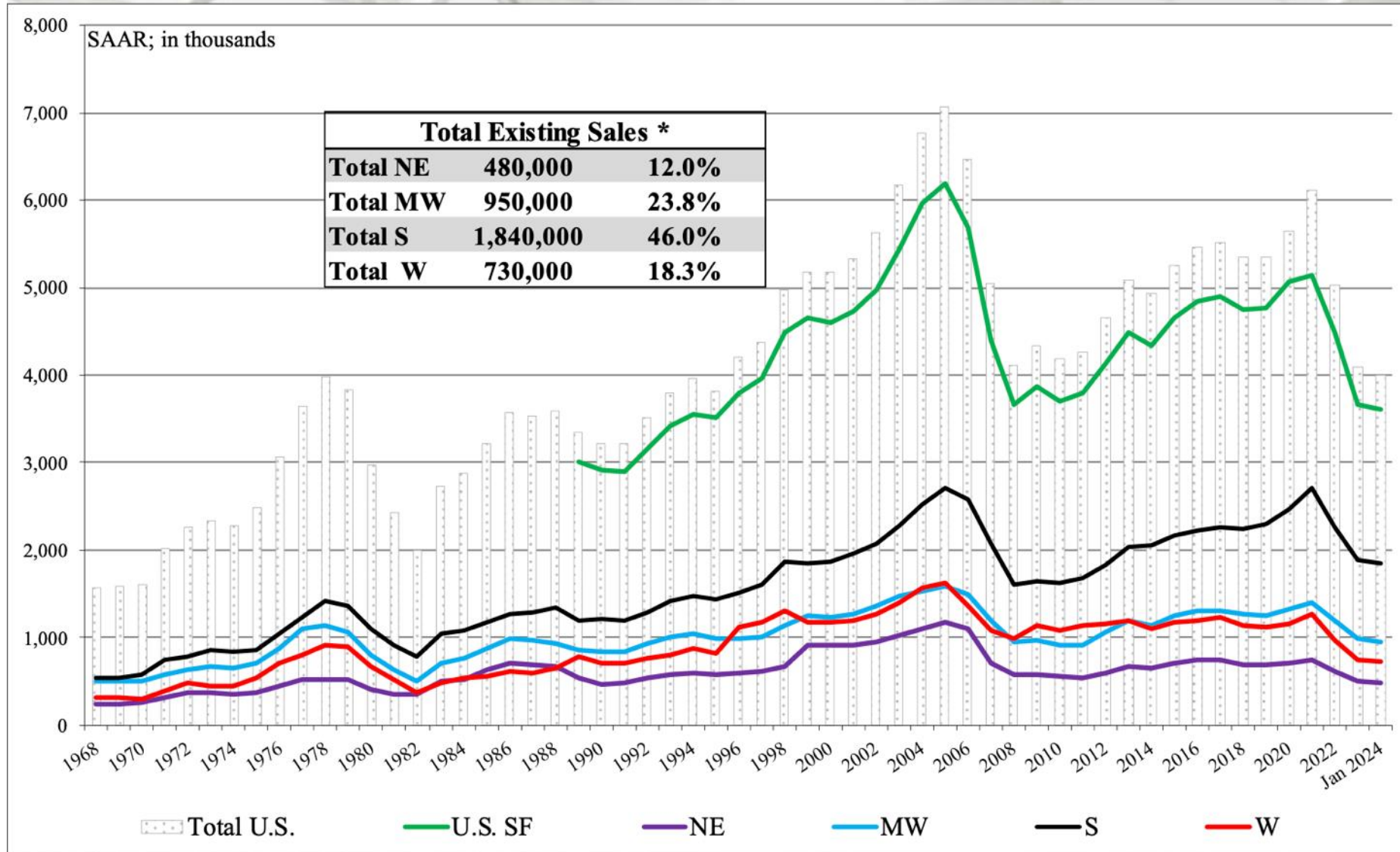
* Sales tallied by price category, nominal dollars.

Total Construction Spending (adjusted): 1993 – January 2024



Reported in adjusted \$US: 1993 – 2021 (adjusted for inflation, BEA Table 1.1.9); January 2024 reported in nominal US\$.

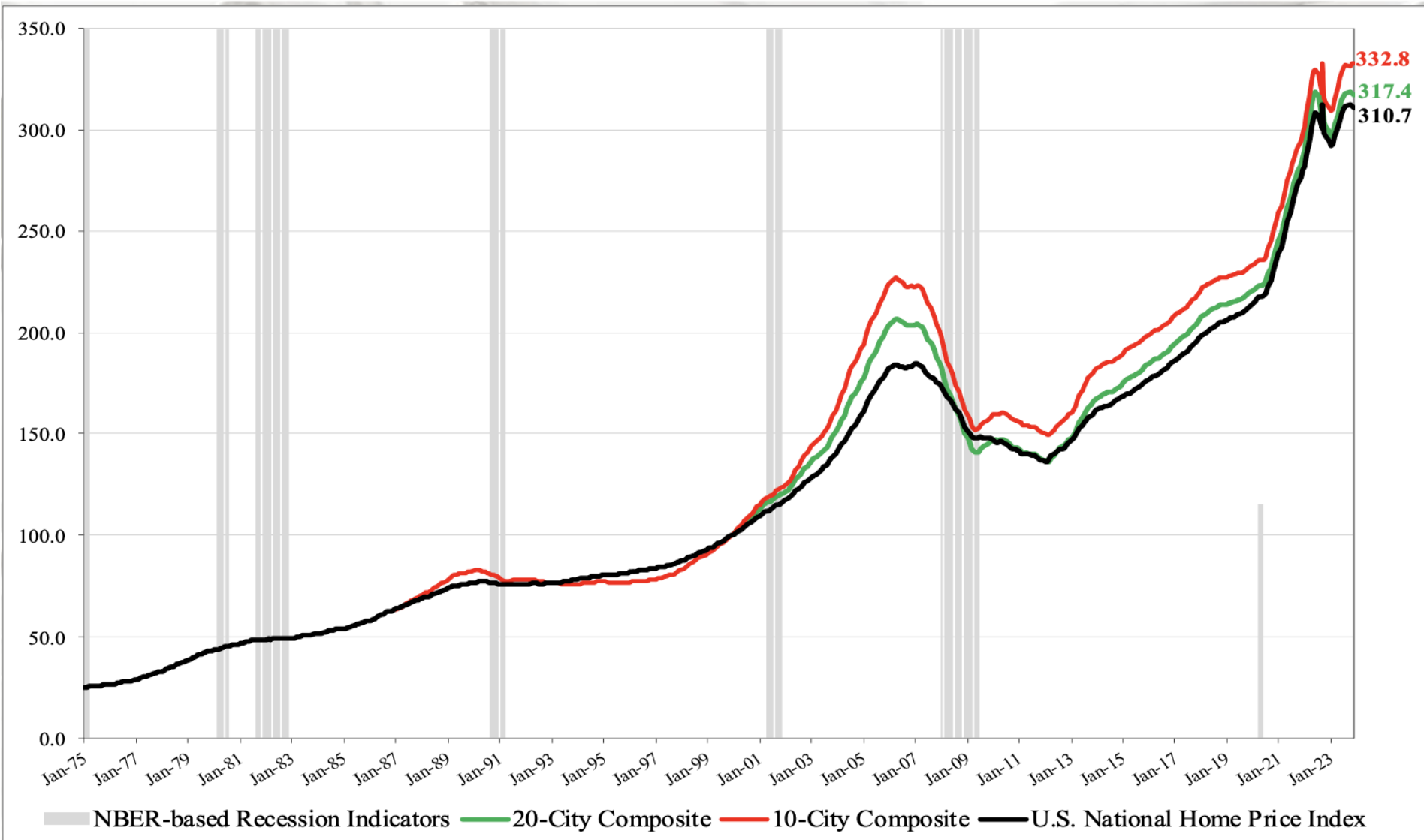
Existing House Sales



NE = Northeast; MW = Midwest; S = South; W = West

* Percentage of total existing sales.

S&P/Case-Shiller Home Price Indices



* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

Problems in US Housing

- Mortgage interest rates remain higher than pre-pandemic
 - Mean = 7.74 % (1971 until 2023), High = 18.63% in 1981, 2.65% in 2021.
- Only 8% of the 25-million Millennials/Gen X currently qualify for a loan.
- 96.5-million households cannot afford a median priced new house.
- Unaffordability:
 - Existing sales: Jan '24 median price, **\$379,100**
 - New Sales: Jan '24 median price, **\$420,700**

<https://woodproducts.sbio.vt.edu/housing.html>

**The Virginia Tech–USDA Forest Service
Housing Commentary: Section I
June 2023**

 VIRGINIA TECH. Virginia Tech • Virginia State University	 Virginia Cooperative Extension Virginia Tech • Virginia State University
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Softwood Lumber Markets

Softwood Lumber Markets

- Home construction.
- Softwood dimension lumber.
 - Studs
 - 2x4
 - 2x6
 - 2x8 and so on...
- 35% of softwoods used in USA are made in Canada.

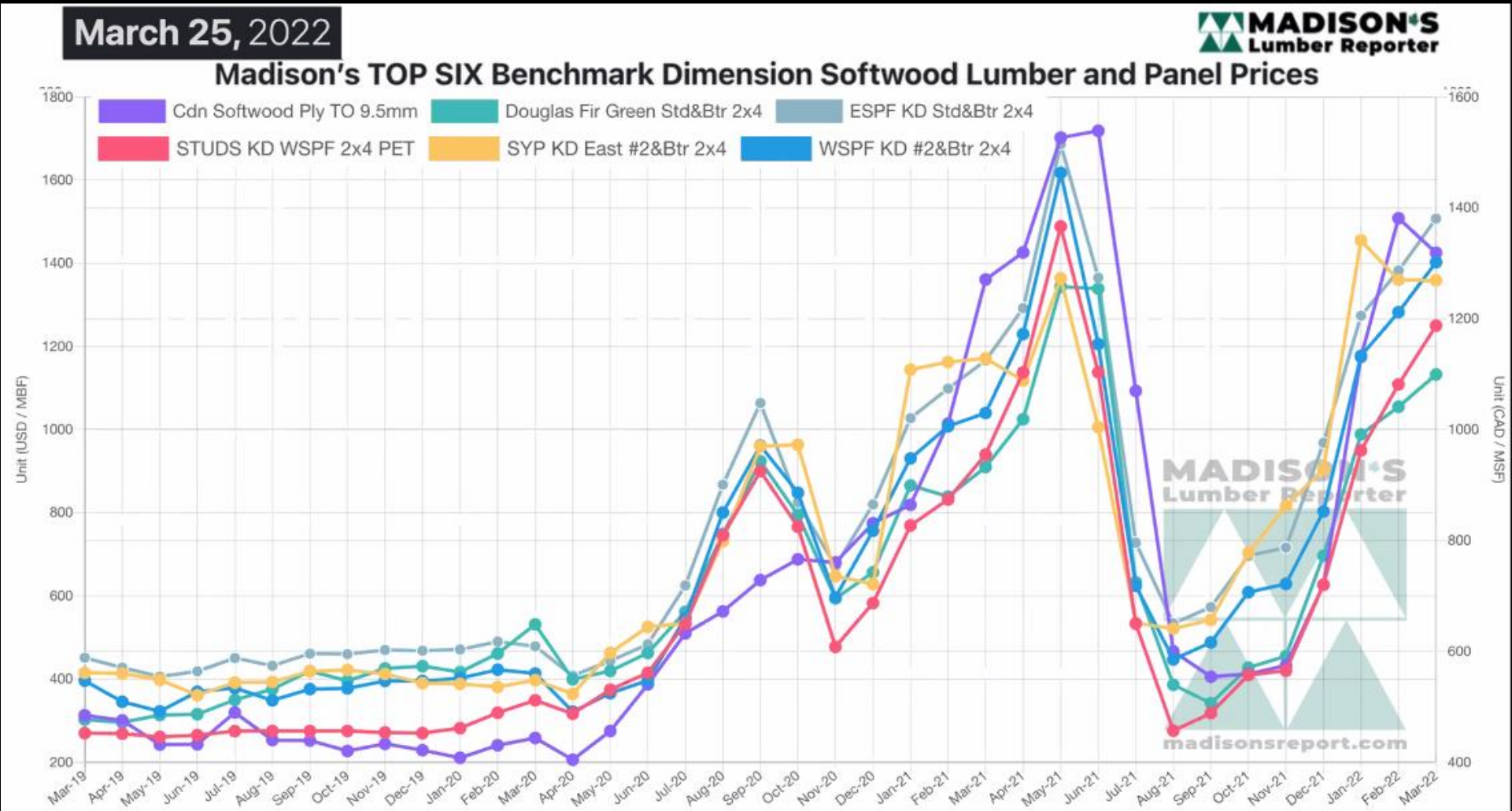
Softwood Lumber Markets

- Repair & remodel and single-family construction
 - comprise ~65-70% of softwood lumber demand
 - ~70-75% of oriented strand board (OSB) demand
 - A rough rule-of-thumb suggests that each single-family home utilizes ~15,000 board feet of lumber and ~10,000 square feet of panels (OSB and plywood)

Softwood Lumber Markets

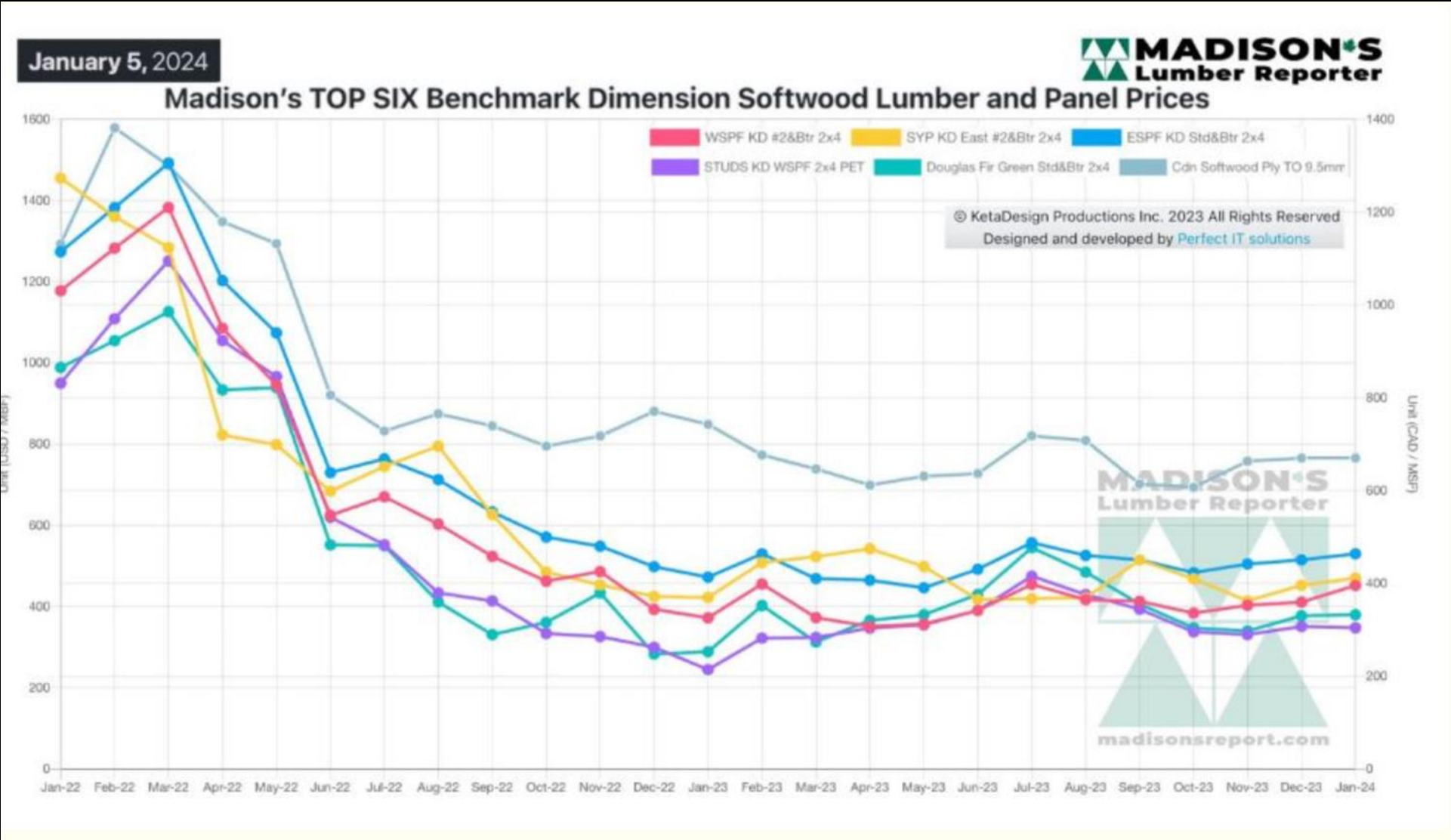
- In the past we saw a 1.5 year up and down cycle – now we are seeing longer term demand in USA.
- Just two years ago (2022) we saw:
 - Not enough material to meet ongoing high demand – What does this mean?
 - Escalator clauses built into the contract, which are passed onto the home buyer.

2022



Source: Keta Kosman, Editor/Owner, Madison's Lumber Reporter

Today



Source: 2024, Madison's Lumber Reporter

Softwood Lumber Markets

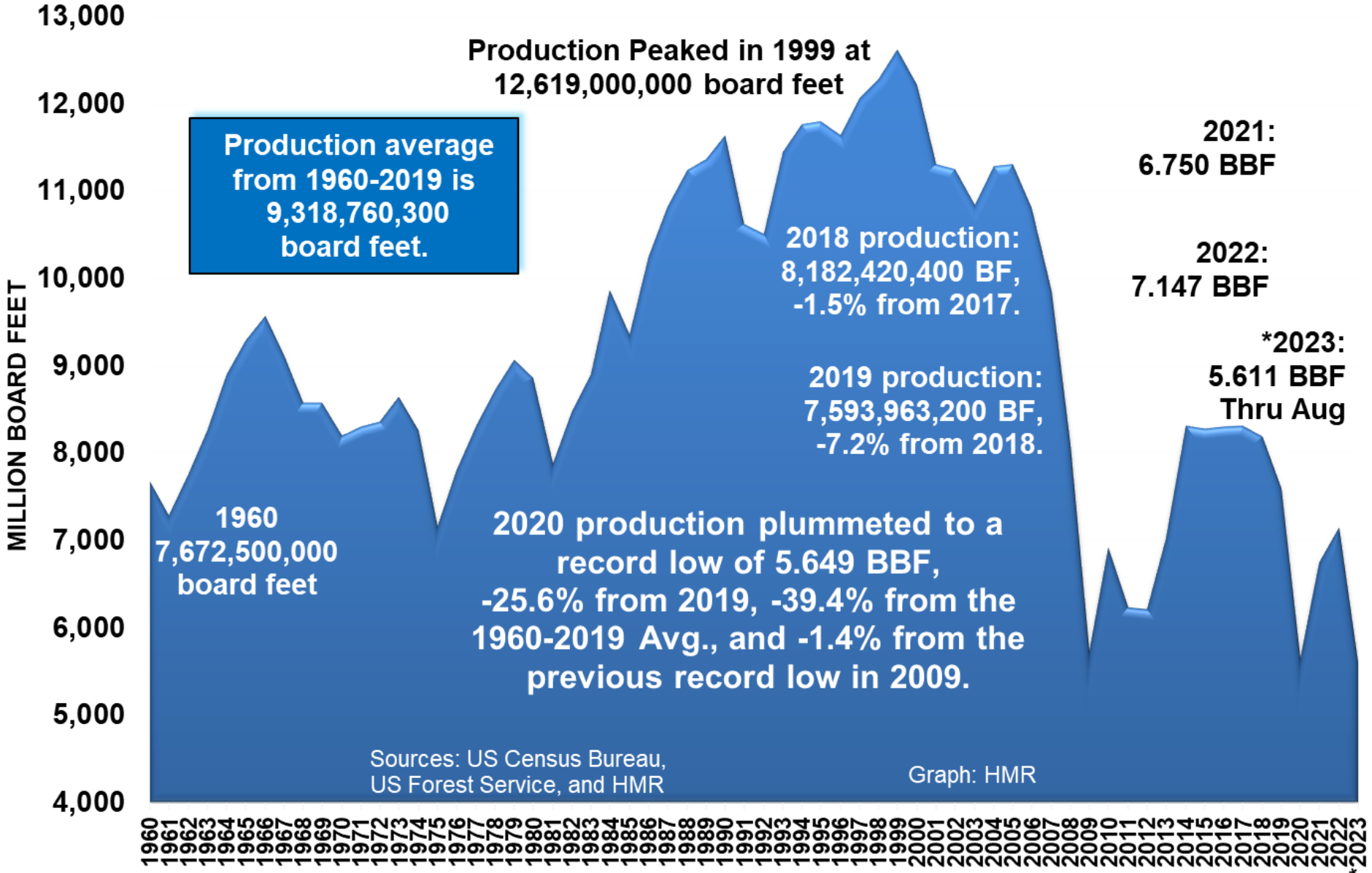
- What did I tell you in 2022?
 - “We will never see \$400 2x4s studs again. A good guess is between \$600 and \$800 when things normalize.”
- 15 years of first-time home buyers are piling up.
- USA has been underbuilt since housing crash of 2008. Need ~2 million housing starts per year to make up for deficit.
- Impacts of non-transitory inflation on our economy.

Pulpwood in Wisconsin

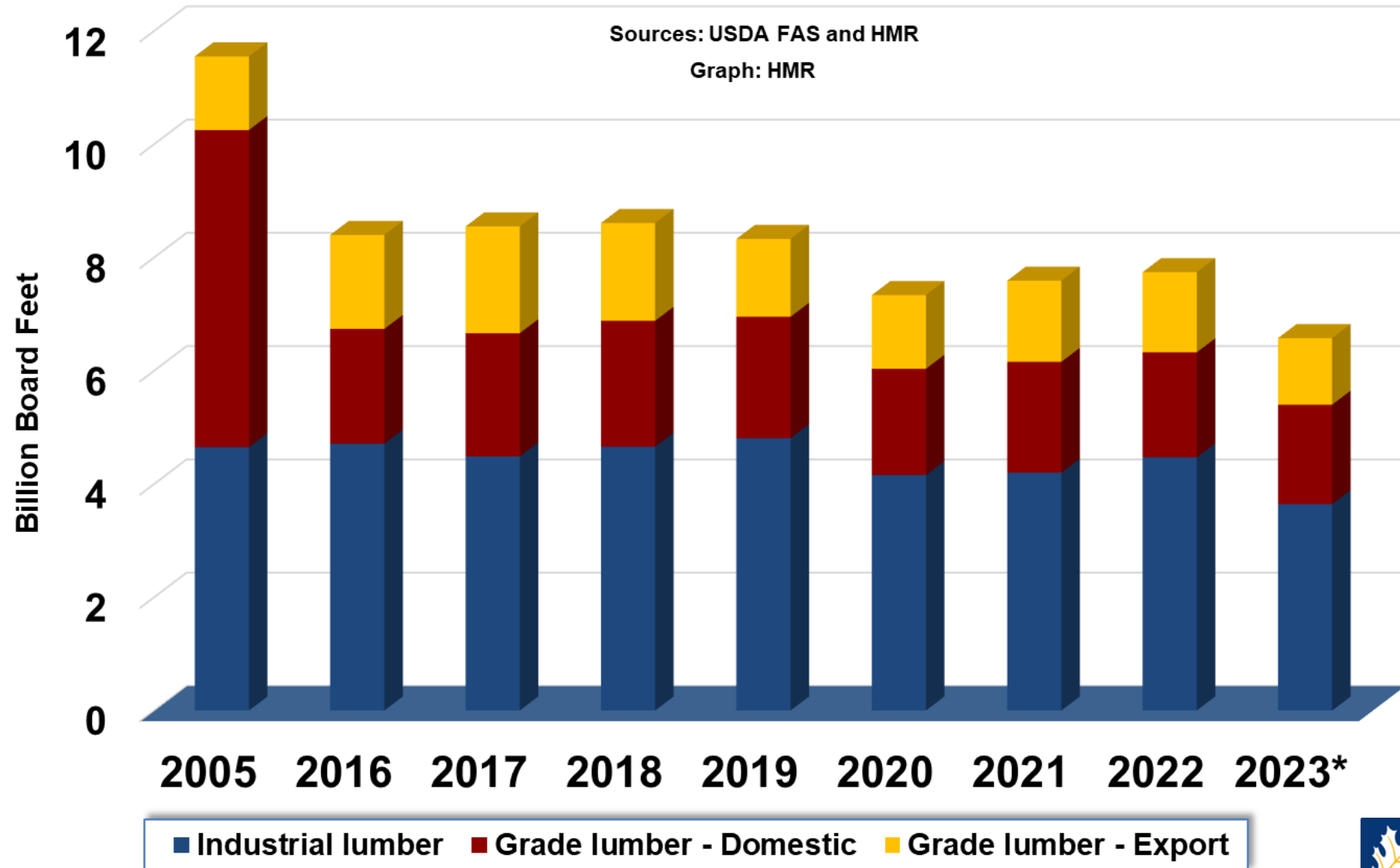
- Is there a future for Wisconsin specialty engineered products?
- They don't compete with the big sawmills in USA and Canada.
- They would provide markets for Wisconsin pulpwood.

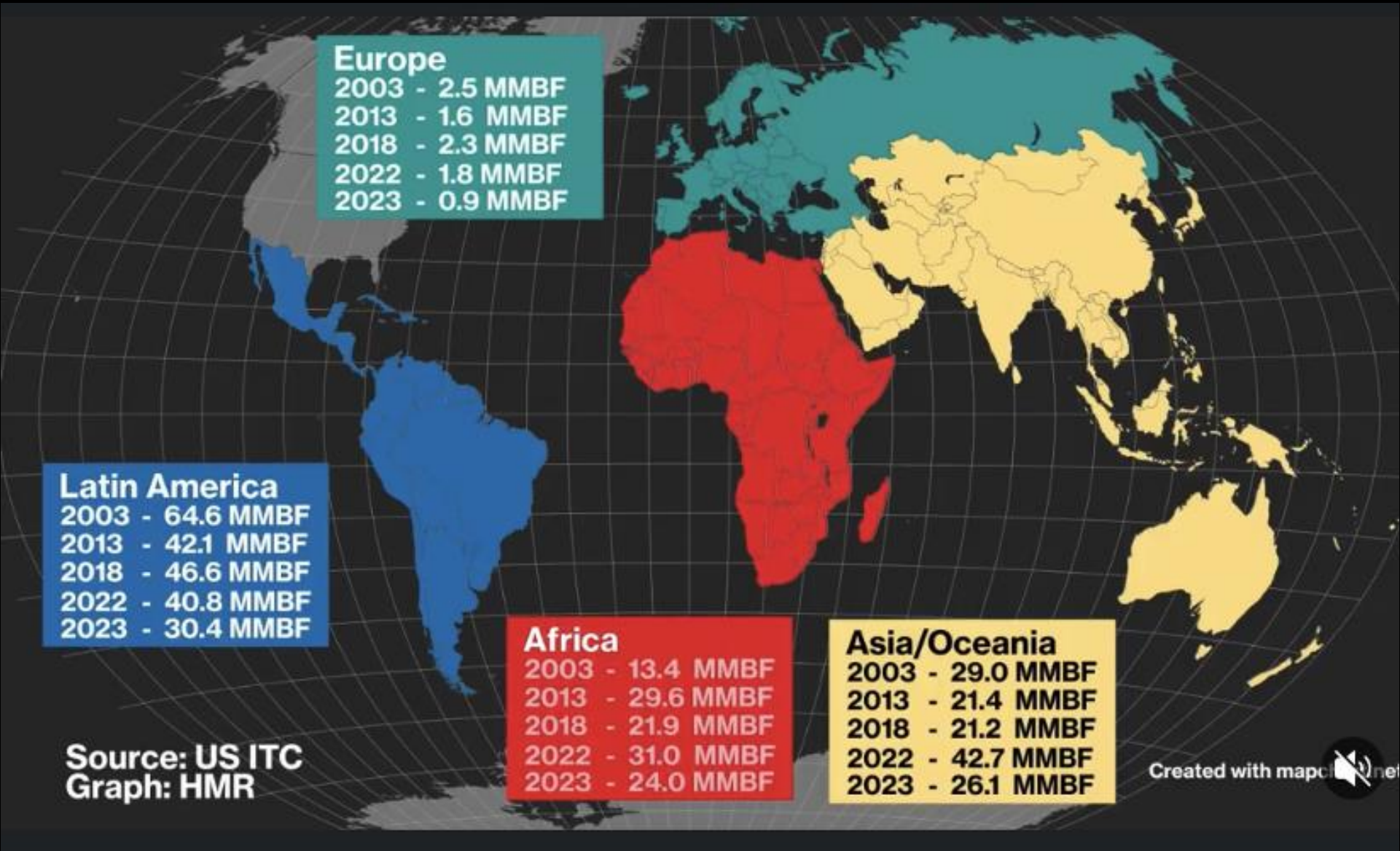
Hardwood Lumber Markets

Eastern US Hardwood Sawmill Production



Hardwood Consumption by US Industrial and Grade Lumber Markets

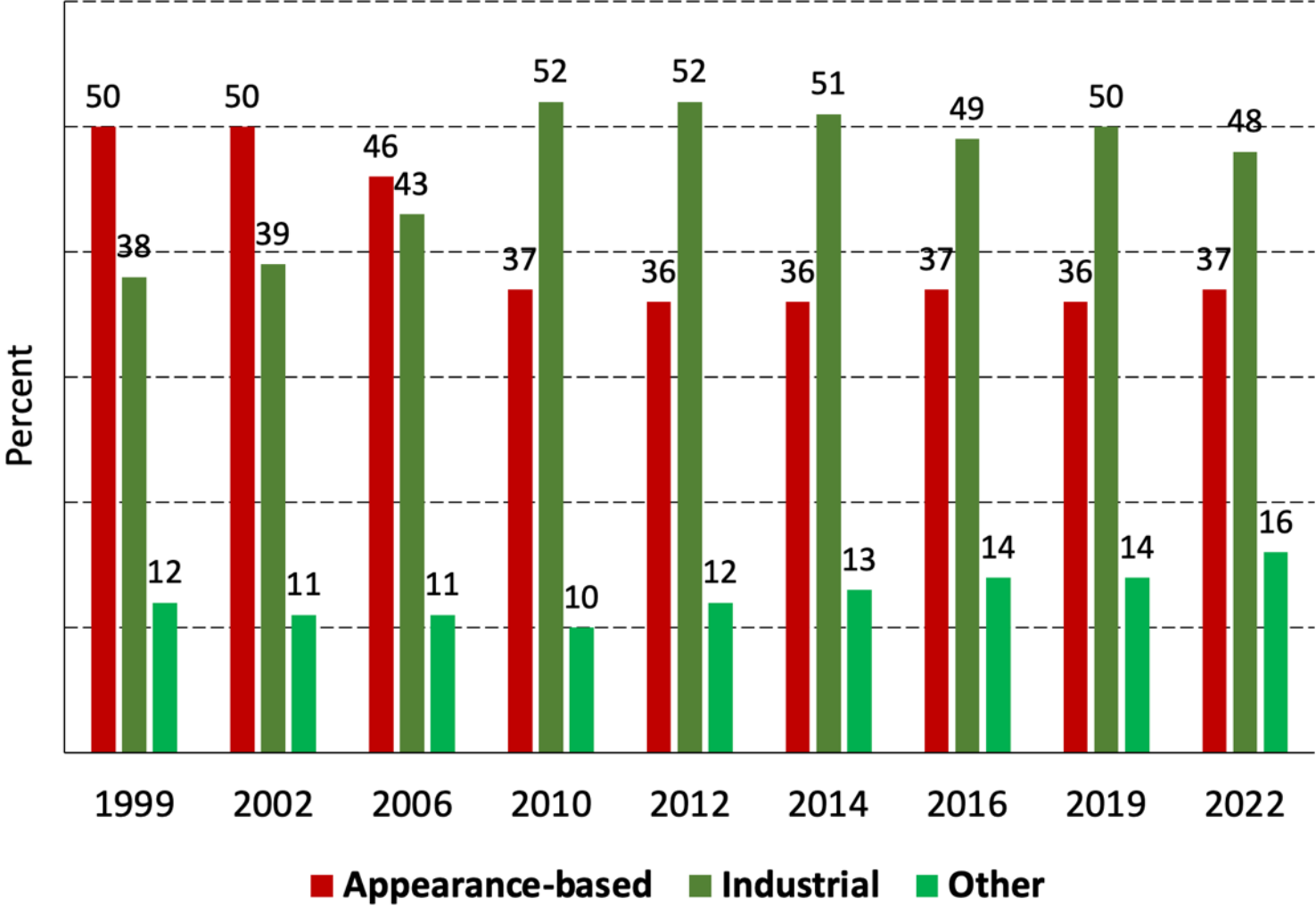




Source: US ITC
Graph: HMR

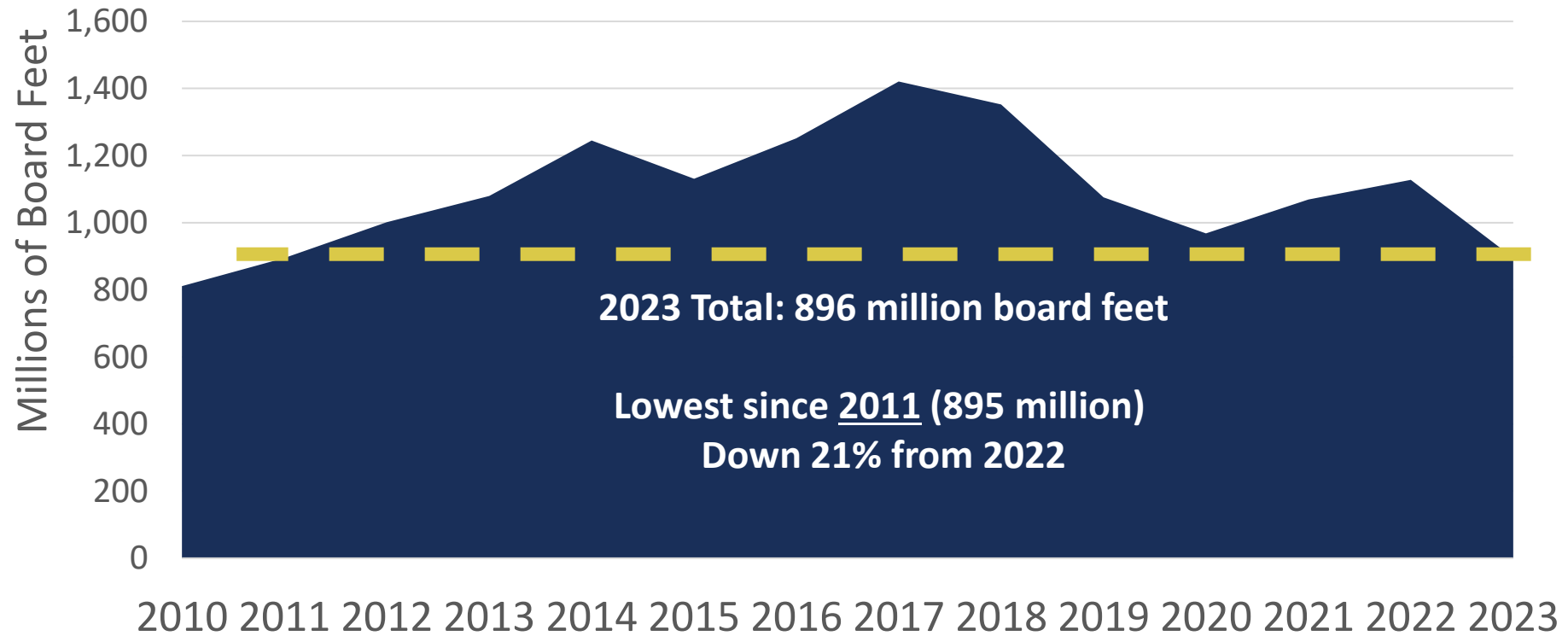
Created with mapchart.net

U.S. hardwood lumber consumption by market segment*



* Exports excluded

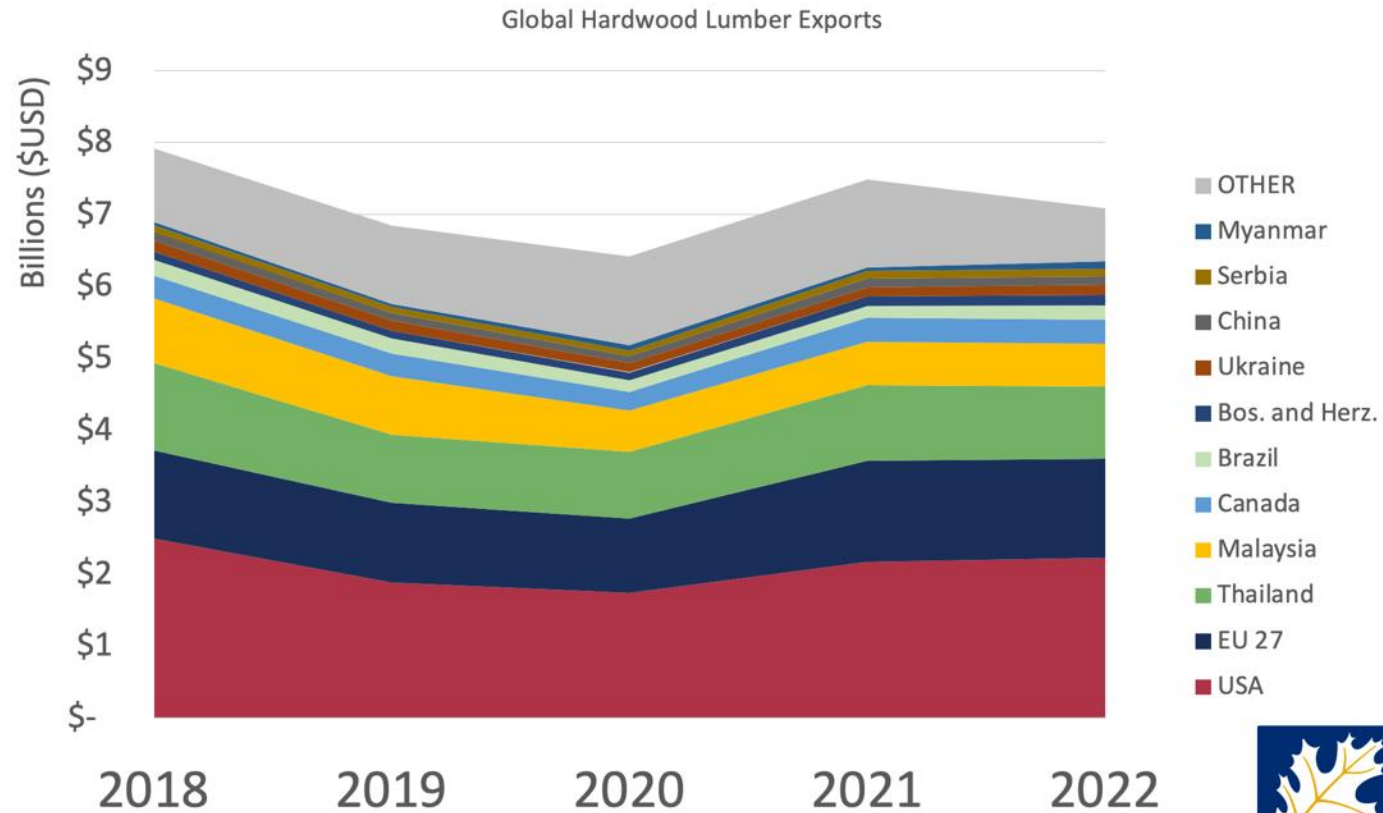
US Lumber Exports, Jan-Sept Totals



Source: USDA GATS, all years Jan-Sept Data



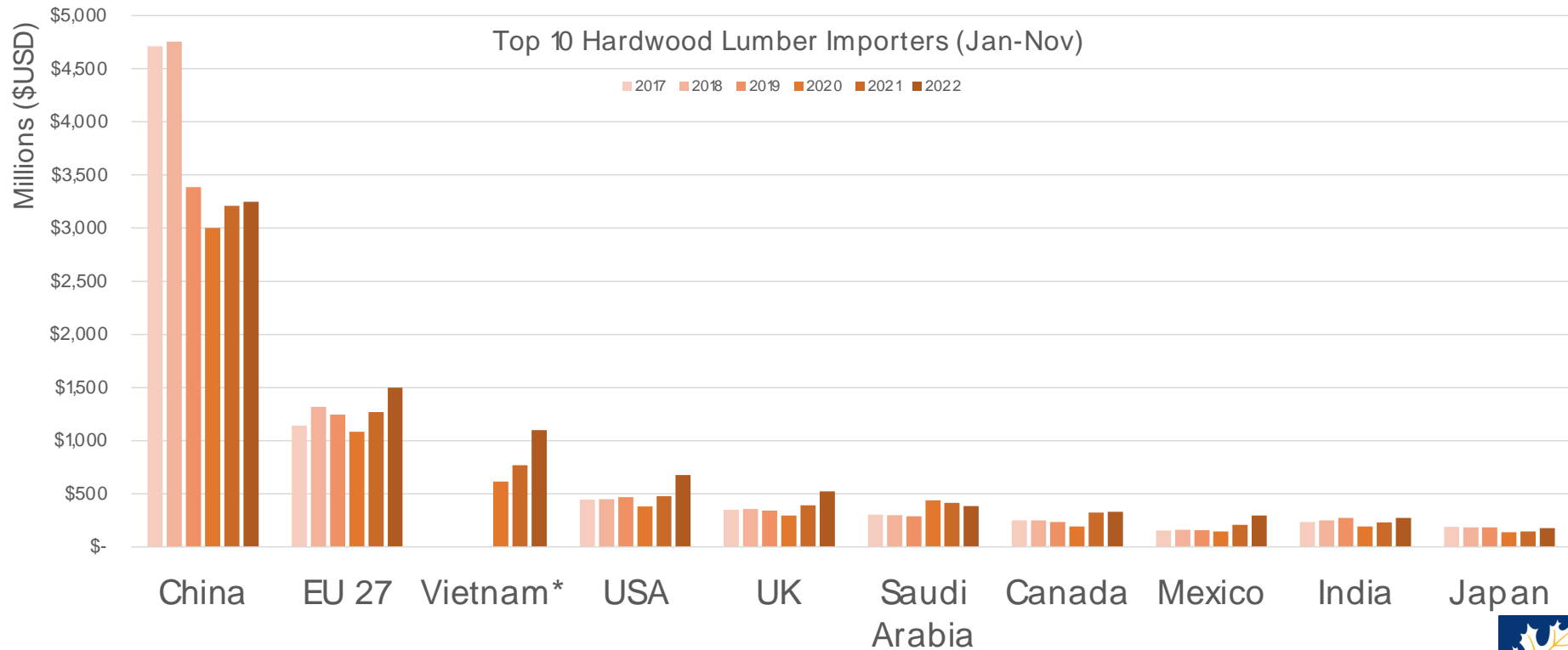
USA Still World's Largest Hardwood Lumber Exporter



Source: Global Trade Atlas



China Still World's Largest Harwood Lumber Importer



Source: USDA GATS



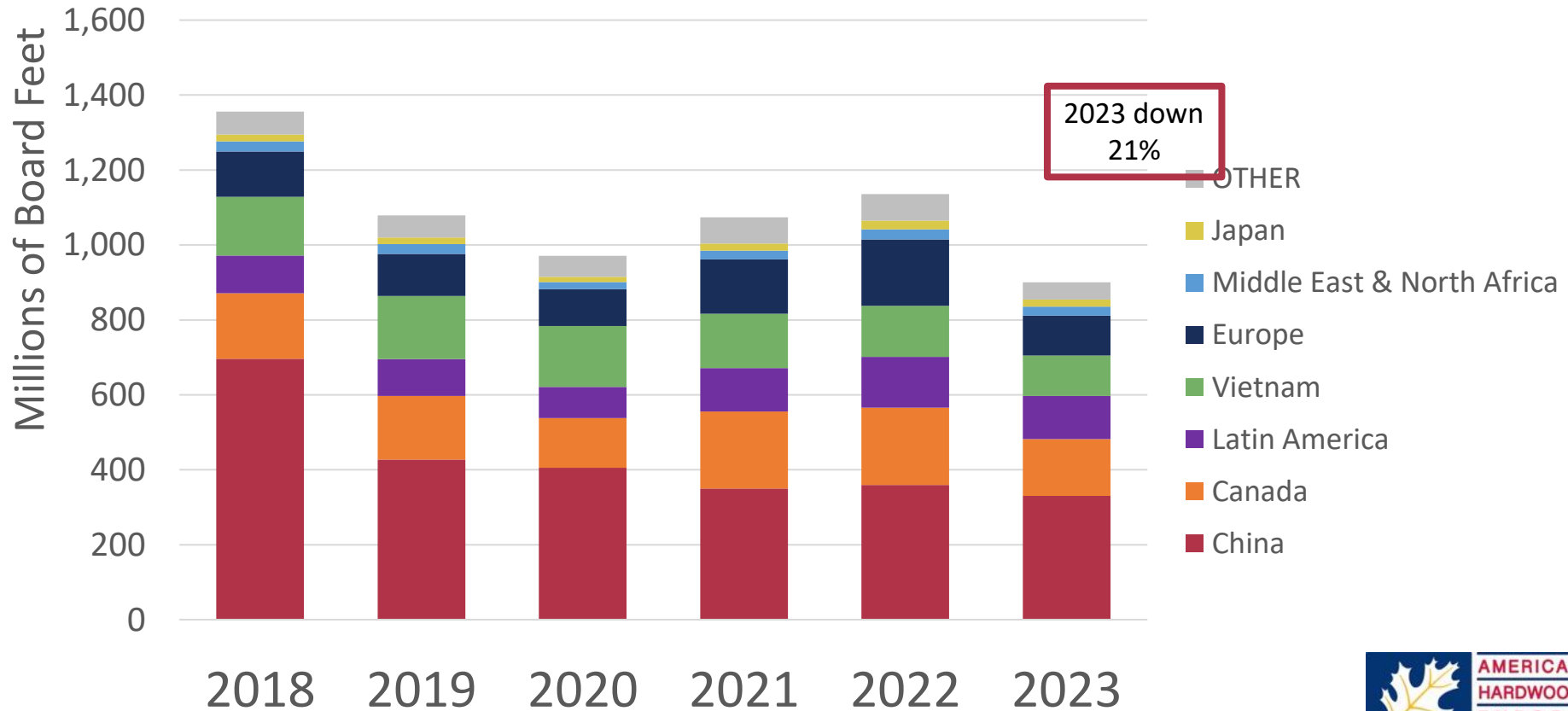
2023 US Lumber Exports Jan-Sept Volume in Board Feet



Source: USDA GATS, all years Jan-Sept Data



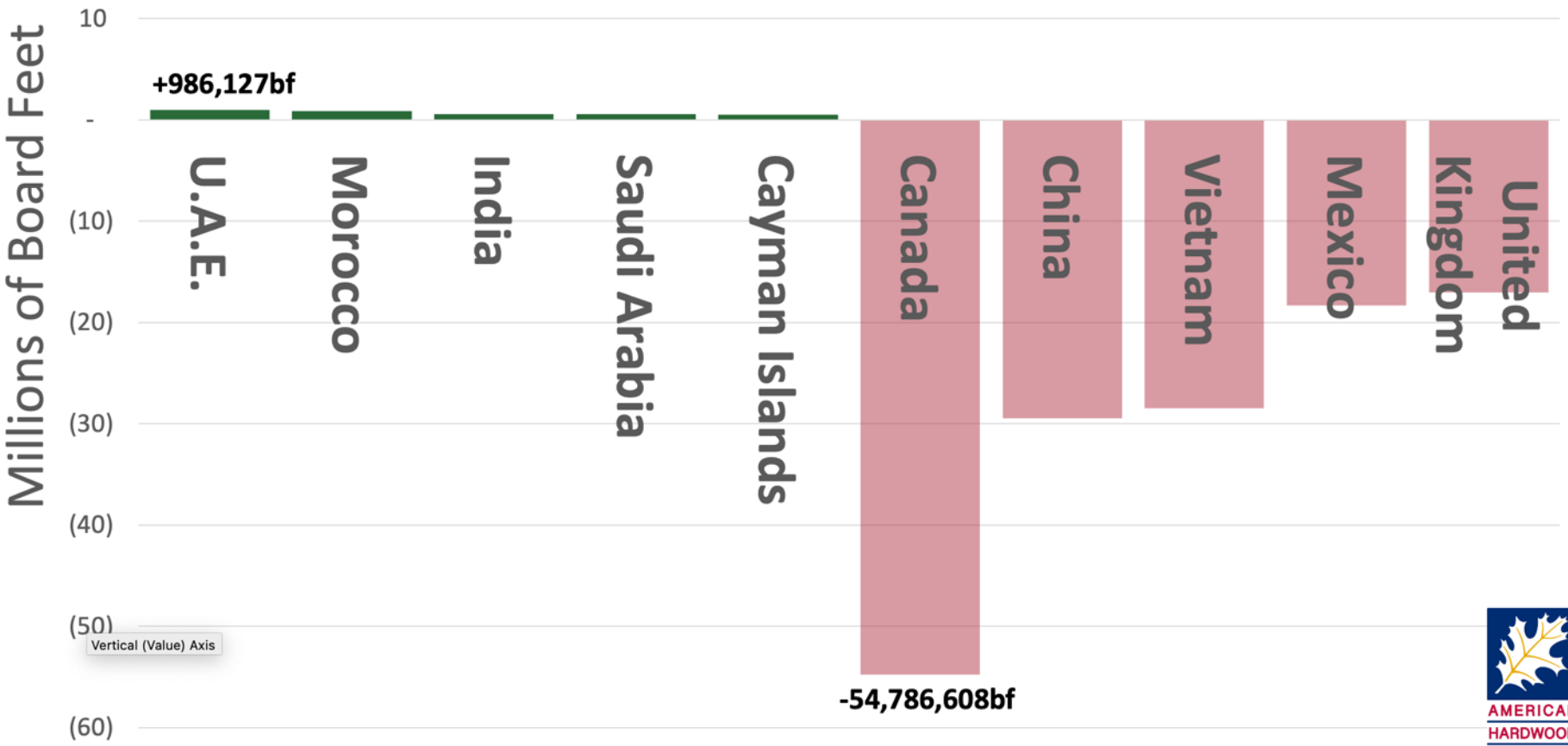
Lumber Exports by Market (3Q in Board Feet)



Source: USDA GATS, all years Jan-Sept Data



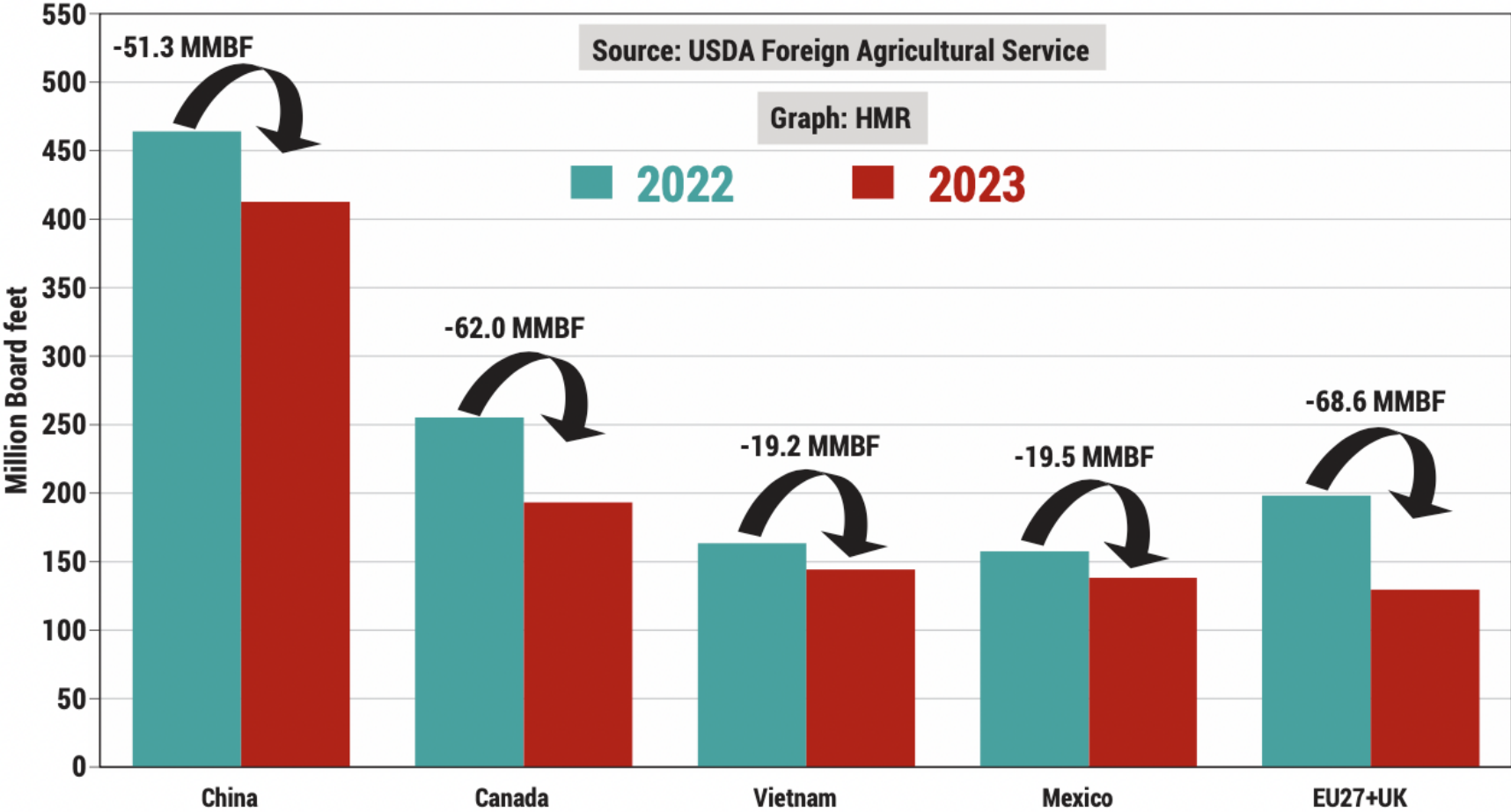
Largest Volume Changes 2023-2022



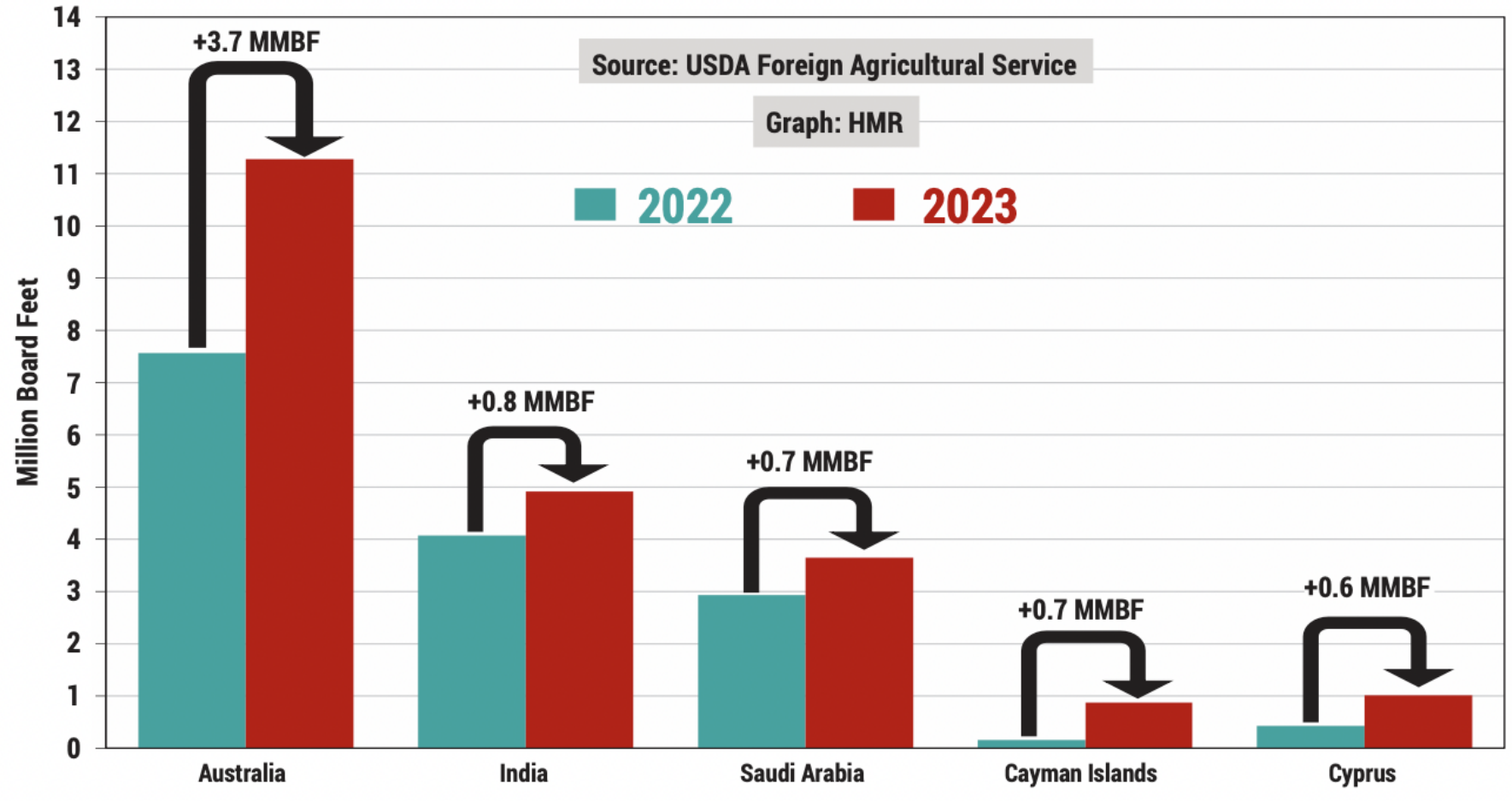
Source: USDA GATS, all years Jan-Sept Data



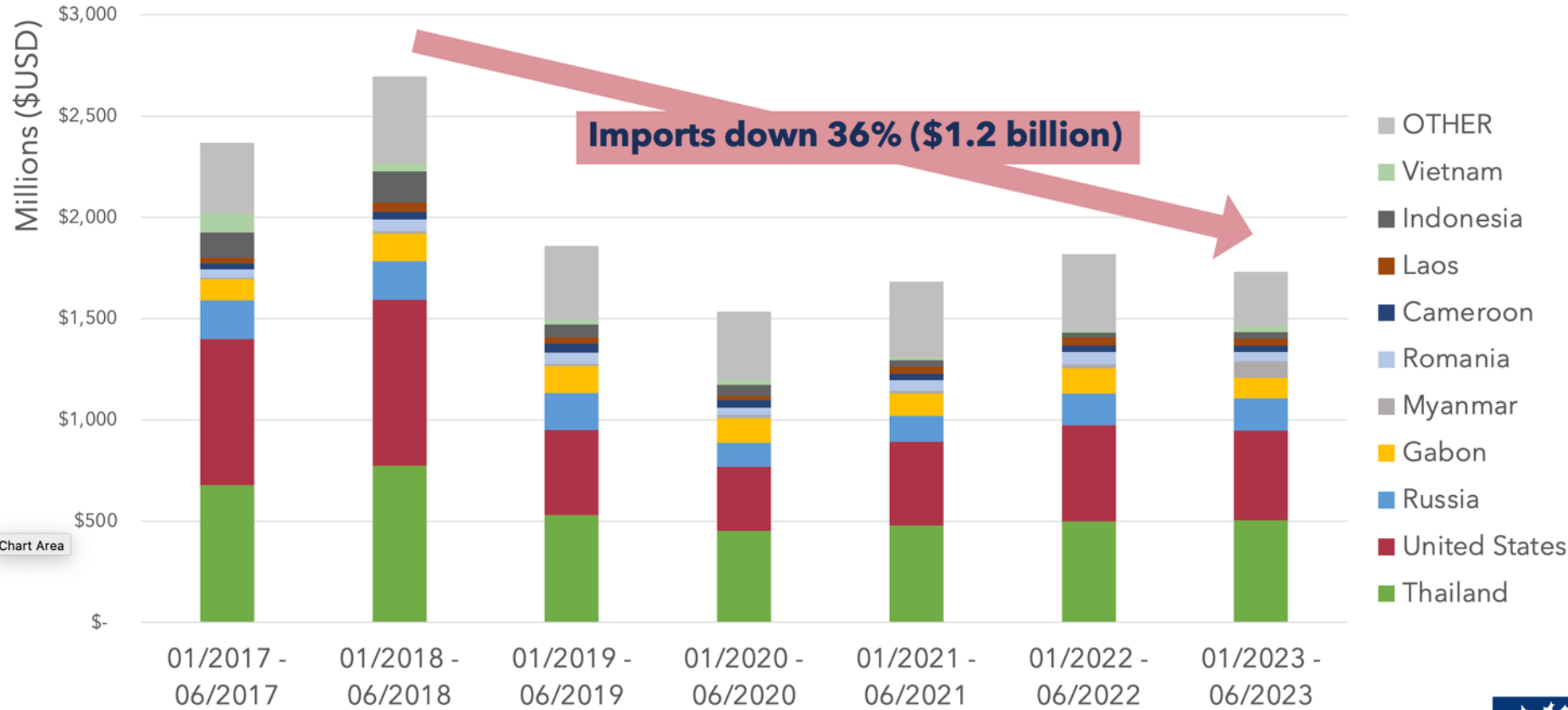
US Exports of Hardwood Lumber to Major Markets 2023 vs. 2022



Largest Increases in US Exports of Hardwood Lumber by Individual Market, 2023 vs. 2022



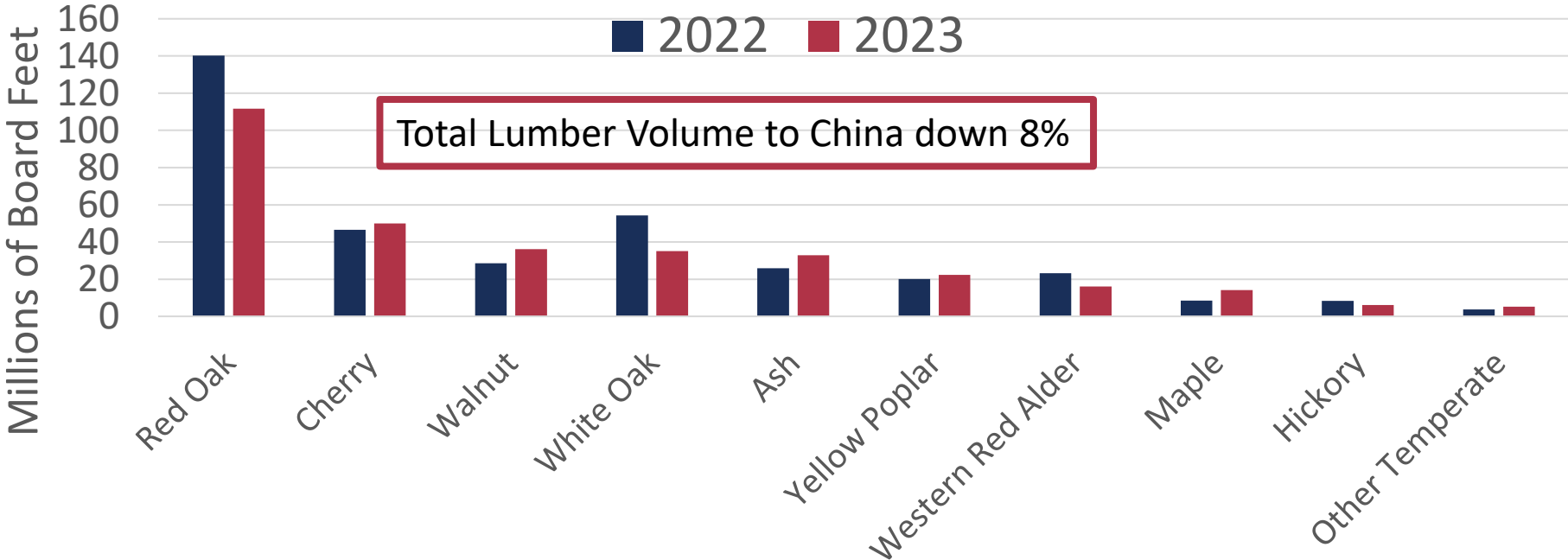
China Lumber Imports from All Countries (Jan-June each year)



Source: Global Trade Atlas



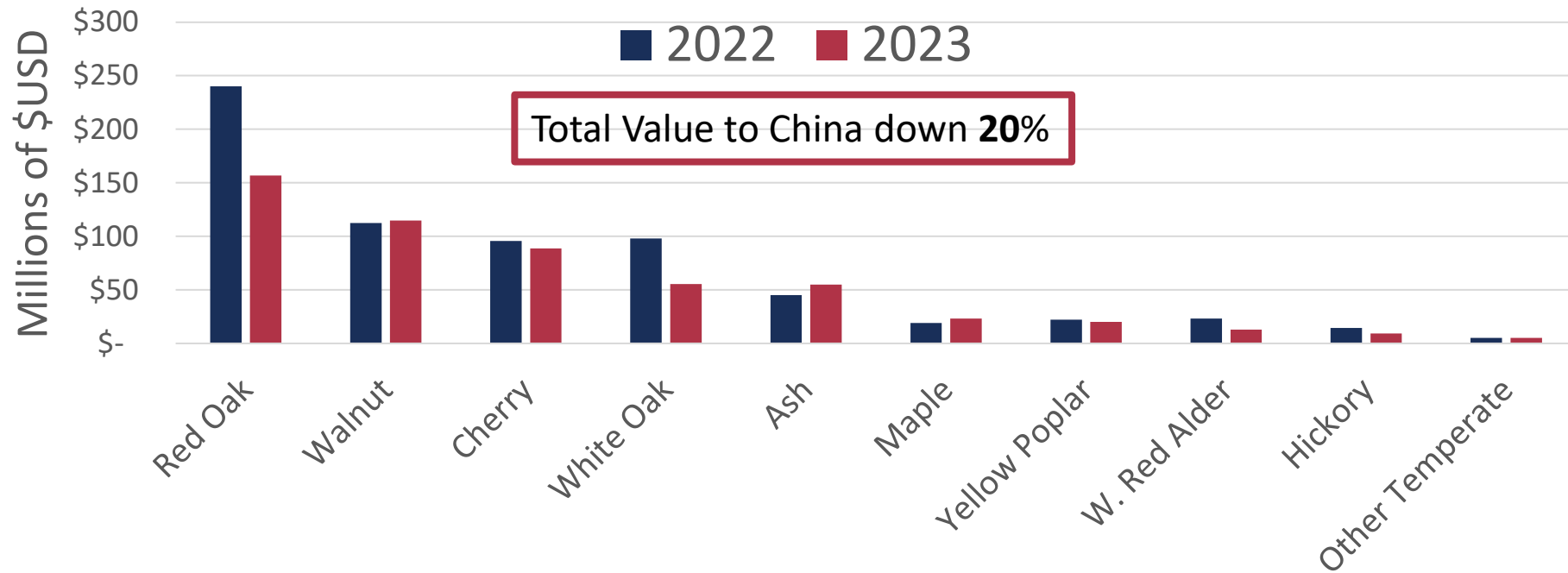
US Lumber to China, 2022 vs 2023 Jan-Sept, Volume in Board Feet



Source: USDA GATS, all years Jan-Sept Data



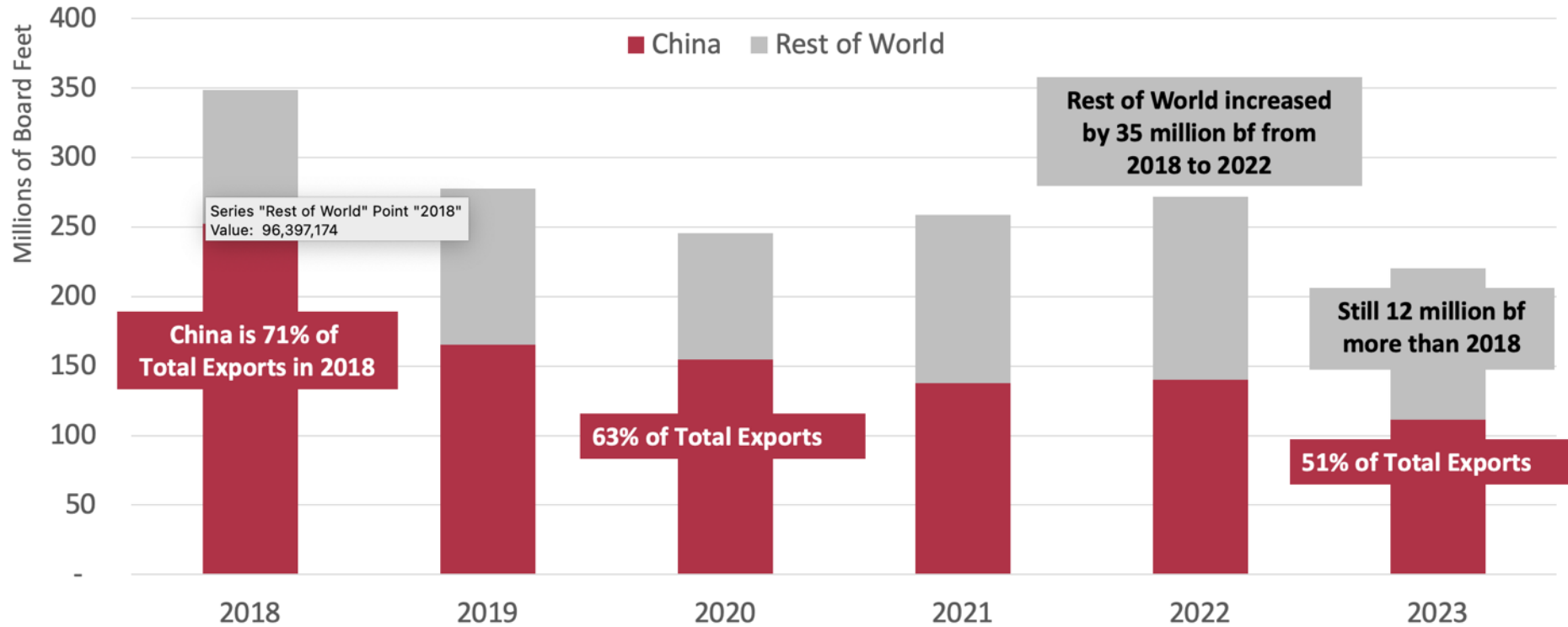
US Lumber to China, 2022 vs 2023 Jan-Sept, Value in \$USD



Source: USDA GATS, all years Jan-Sept Data



Red Oak Lumber Exports to China and Rest of World (Jan-Sept each year)



Source: USDA GATS, all years Jan-Sept Data





China at a Crossroads:

- Growth slowing
- Geopolitics over economics
- Return of the “zombie” SOE
- Housing Market in Crisis
- Increasing debt
- Demographic “timebomb”
- Nearshoring/”friendshoring”

China's economy

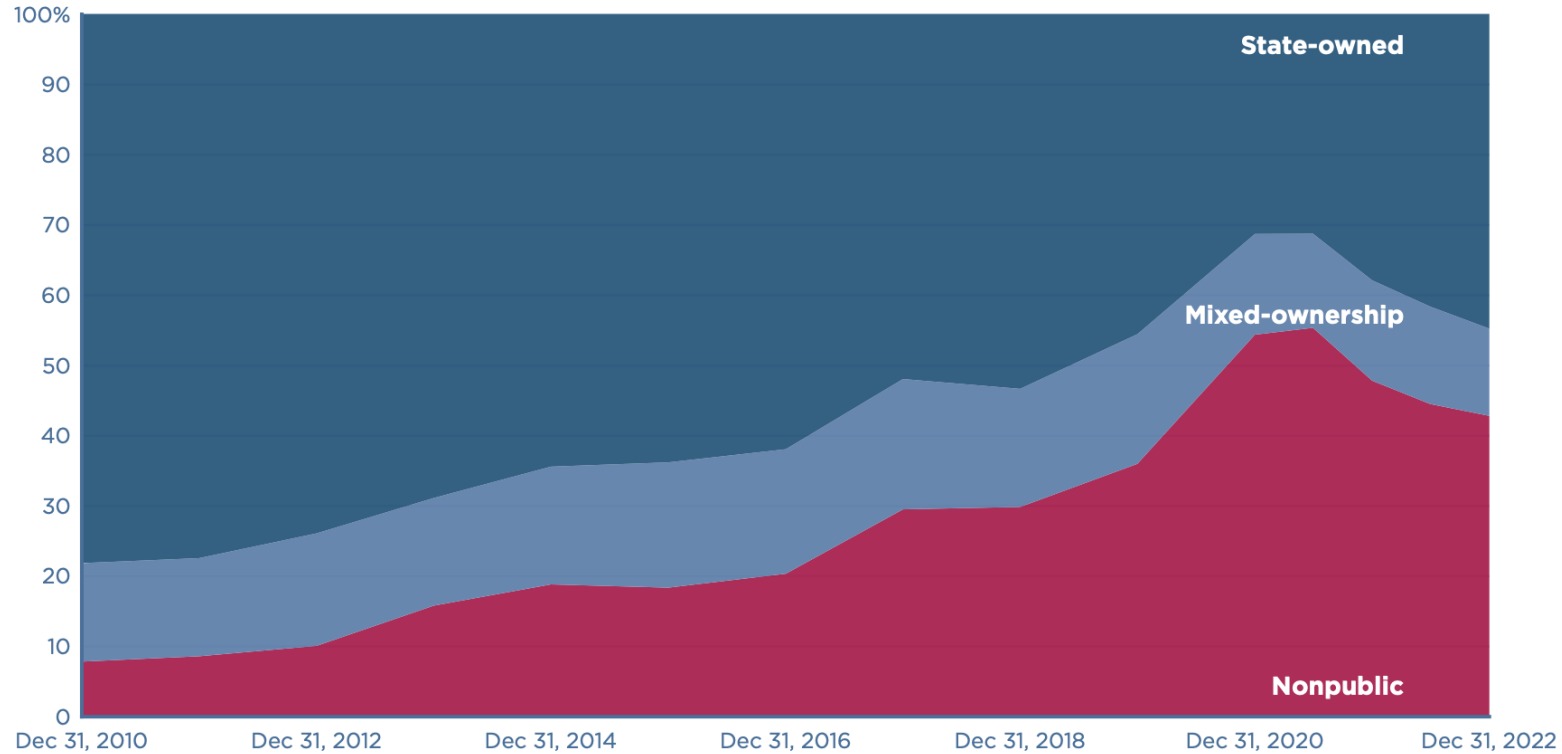
Ideology versus prosperity

How Xi Jinping is damaging China's economy



The private sector has continued to decline as a share of China's largest listed companies since June 2021

Share of aggregate market capitalization of China's top 100 listed firms, by ownership, end-2010 to end-2022



Notes: End-year data from 2010 to 2020; half-yearly from 2021. China's top 100 listed firms are defined as the 100 mainland Chinese firms with the largest market capitalizations, whether listed in the mainland or abroad, including so-called variable-interest

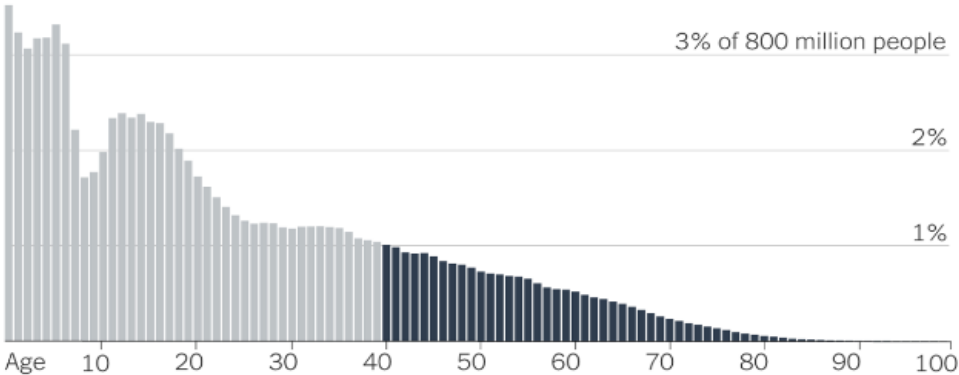


Oxford Economics estimated at the end of 2022 that Chinese housing demand was **8 million** units per year from 2010 through 2019 but would drop to only **4.6 million** per year from next year through 2030.

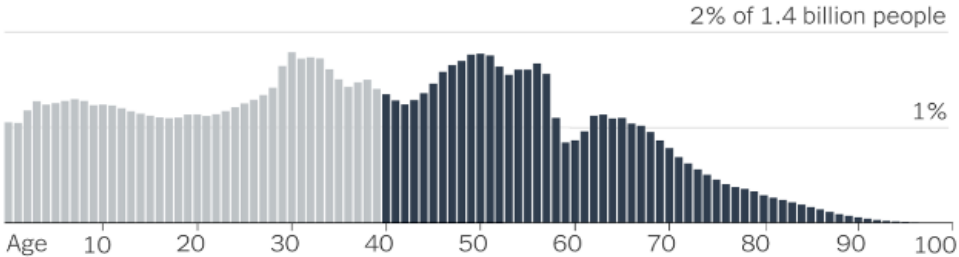
People have moved to the cities, birth rates are falling, and housing speculation has cooled

China's Population by Age

In 1970, 80% of China's population was younger than 40, and half of the country was under 20.



In 2021, half of the country was 40 or older, as China's distribution shifted to more closely resemble other developed nations.

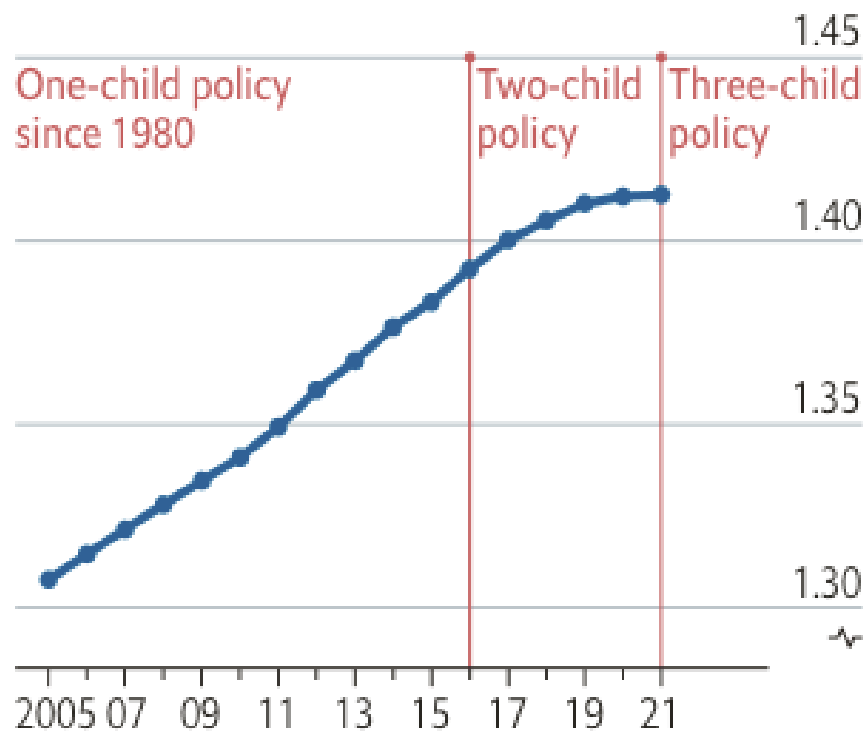


Source: United Nations Population Division (2022)

Ready for the dip

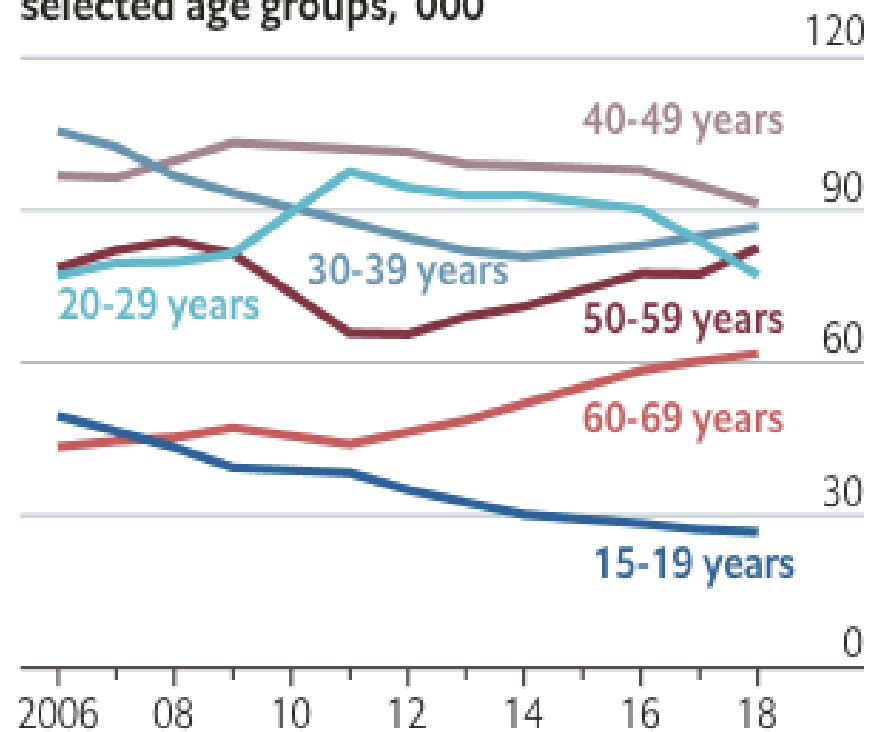
China

Population, bn



Source: National Bureau of Statistics of China

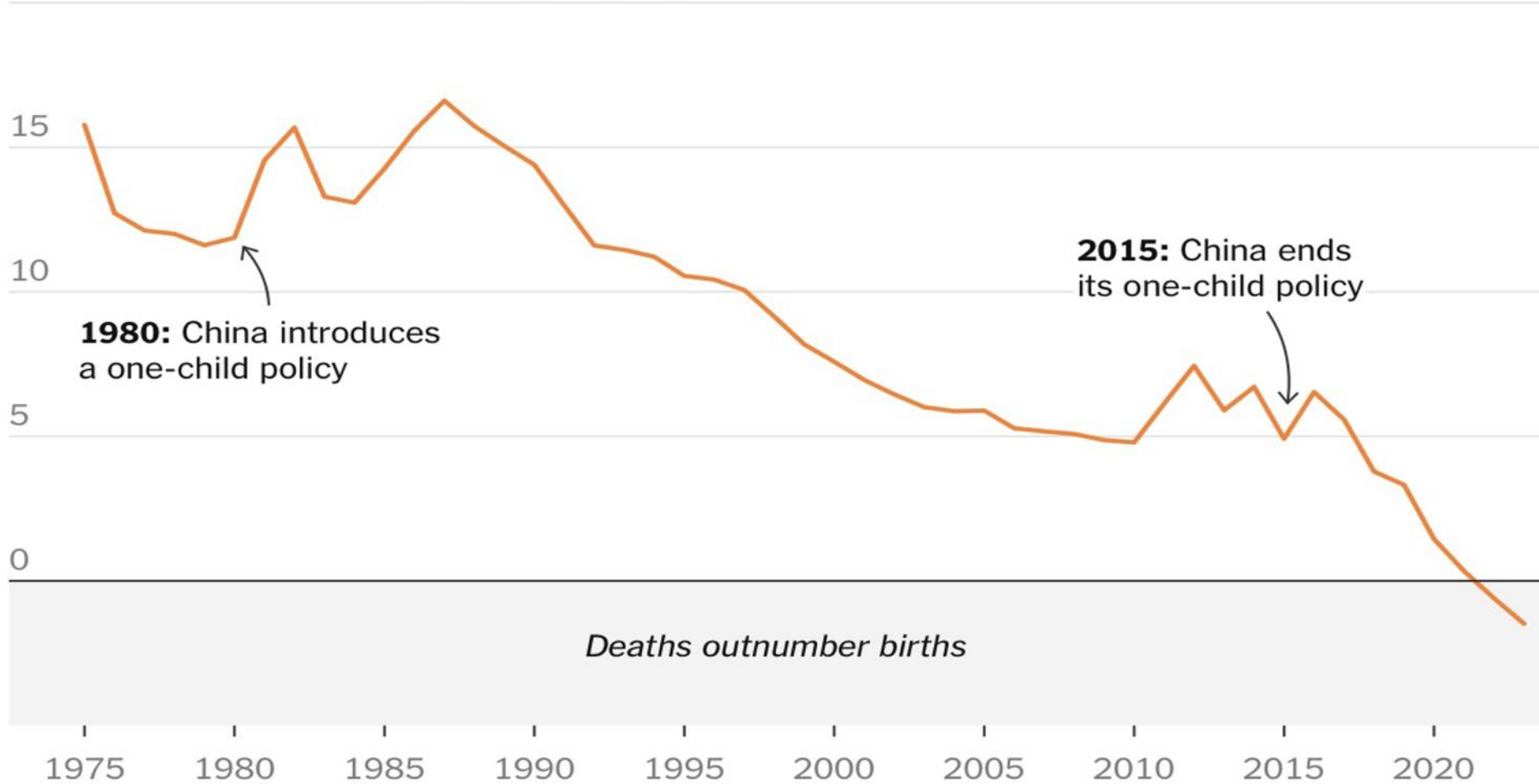
Sample of female population*, selected age groups, '000



*Sample of 0.5-2% of the population

China's population continues to shrink as deaths outnumber births

20 more births than deaths, per 1,000 people



Note: In 2015, China announced that all married couples would be allowed to have two children. In 2021, China said it would allow couples to have three children. • Source: National Bureau of Statistics • By The New York Times

Nearshoring and “Friendshoring”

Moving supply chains to “friendly countries” to limit operations risk

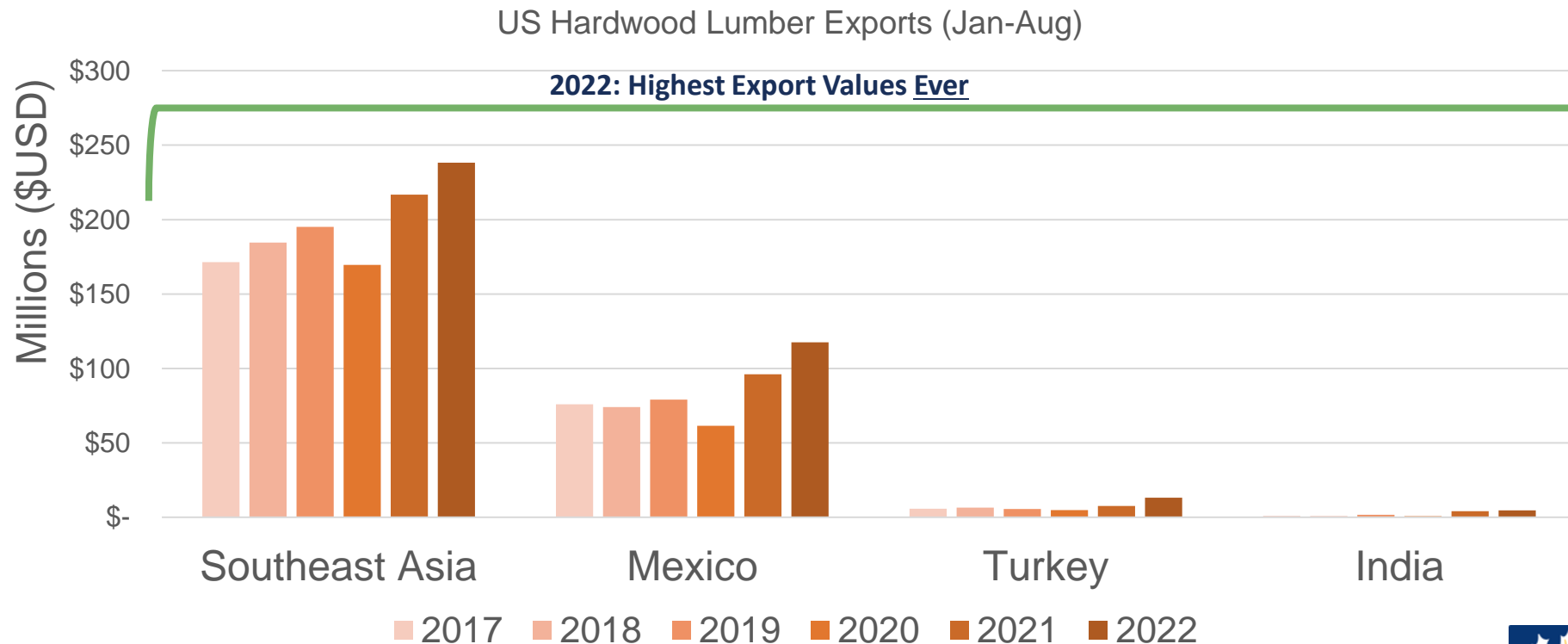
Fueled by logistics, Gov policy, overreliance on one market

- Apple
 - China -> Vietnam
- Samsung
 - China -> Vietnam
- Hasbro
 - China -> India and Vietnam
- Volvo
 - New EV factory in Slovakia for EU market



Beneficiaries of “Nearshoring”

- SE Asia and India for Asian Manufacturing
- Mexico for N. America
- Turkey for Europe

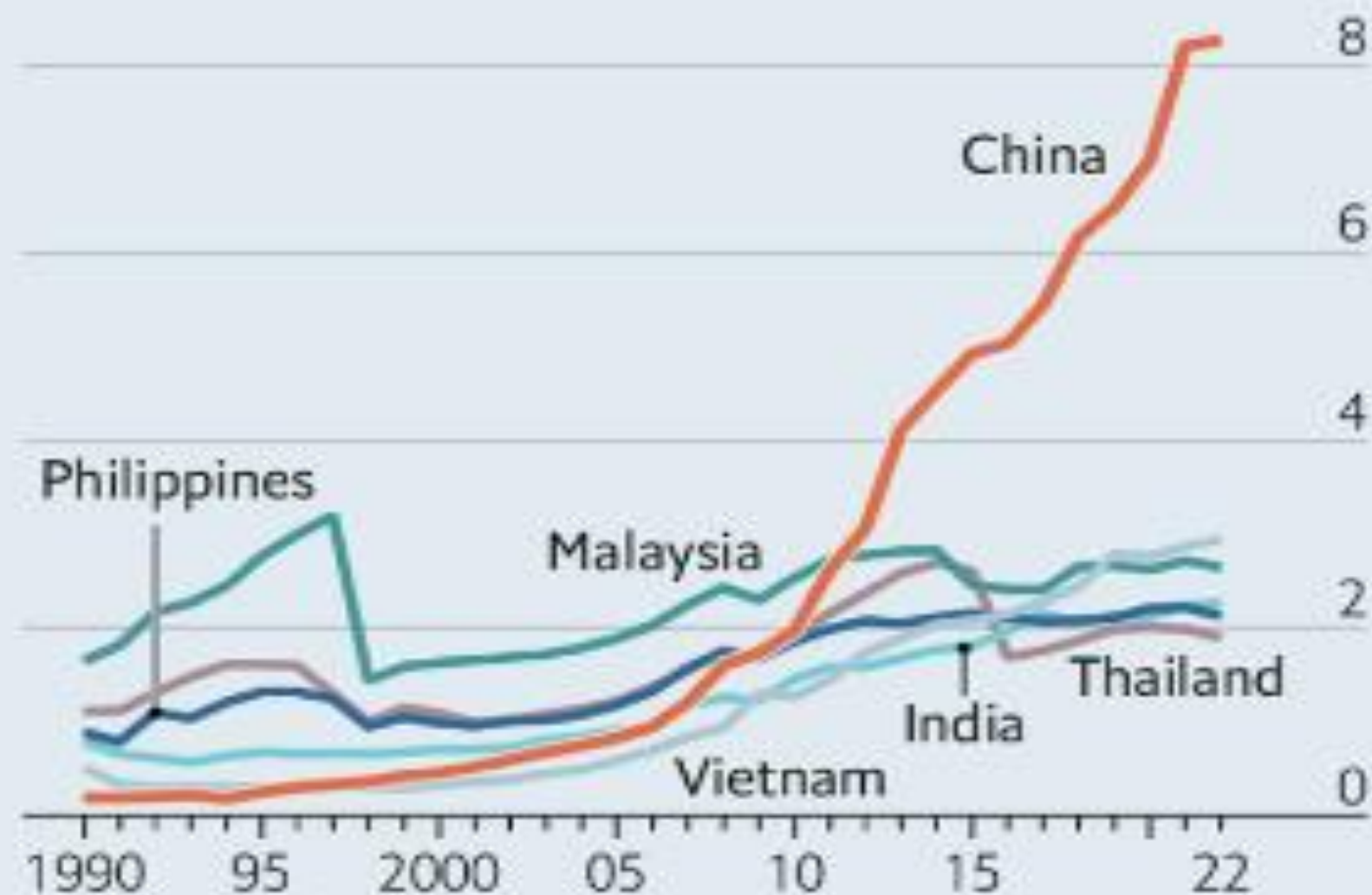


Source: USDA GATS, data for Jan-Aug each year



Chequed and unchequed growth

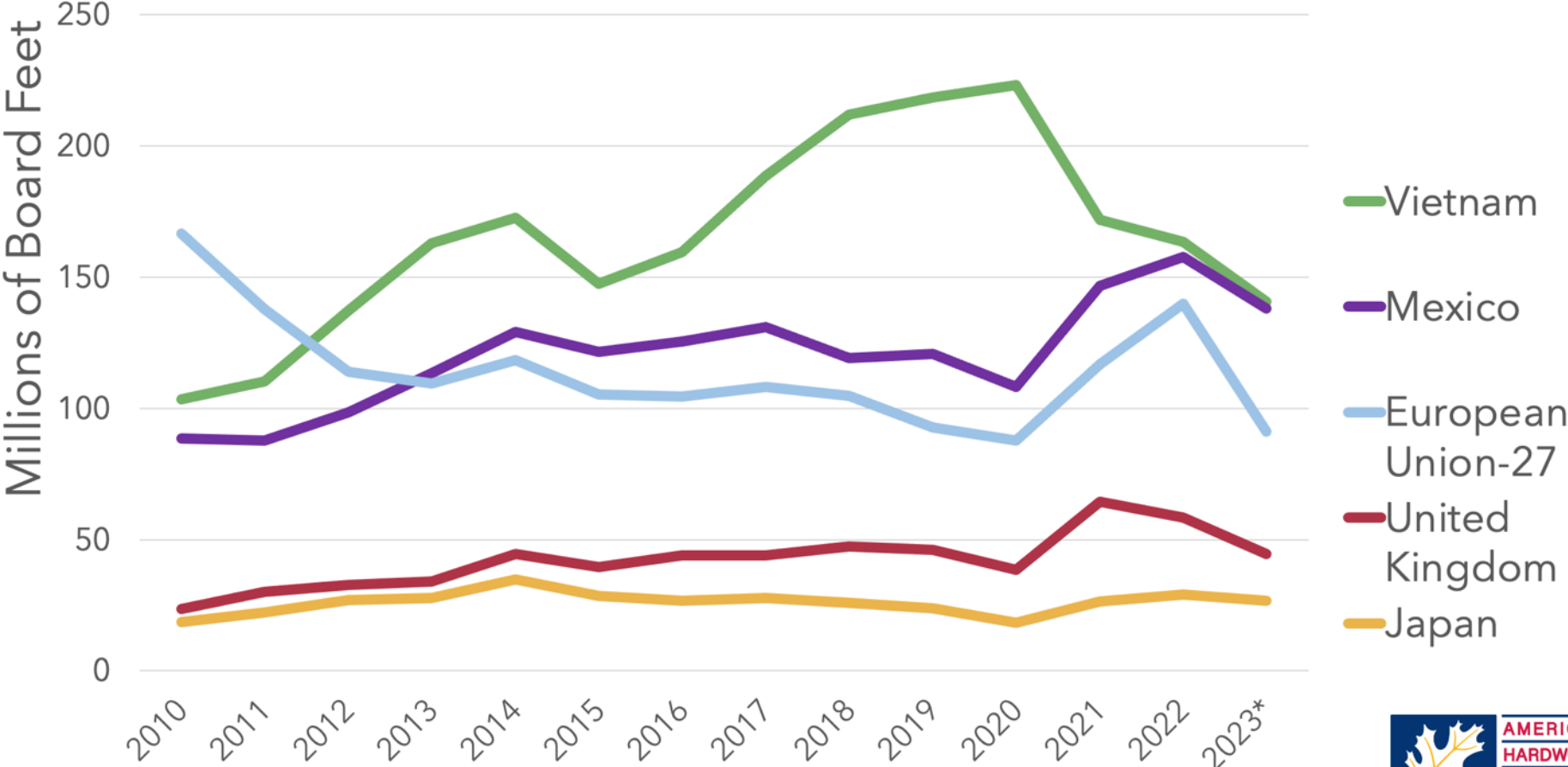
Manufacturing labour cost, \$ per hour



Source: Haver Analytics

Stop Talking about China

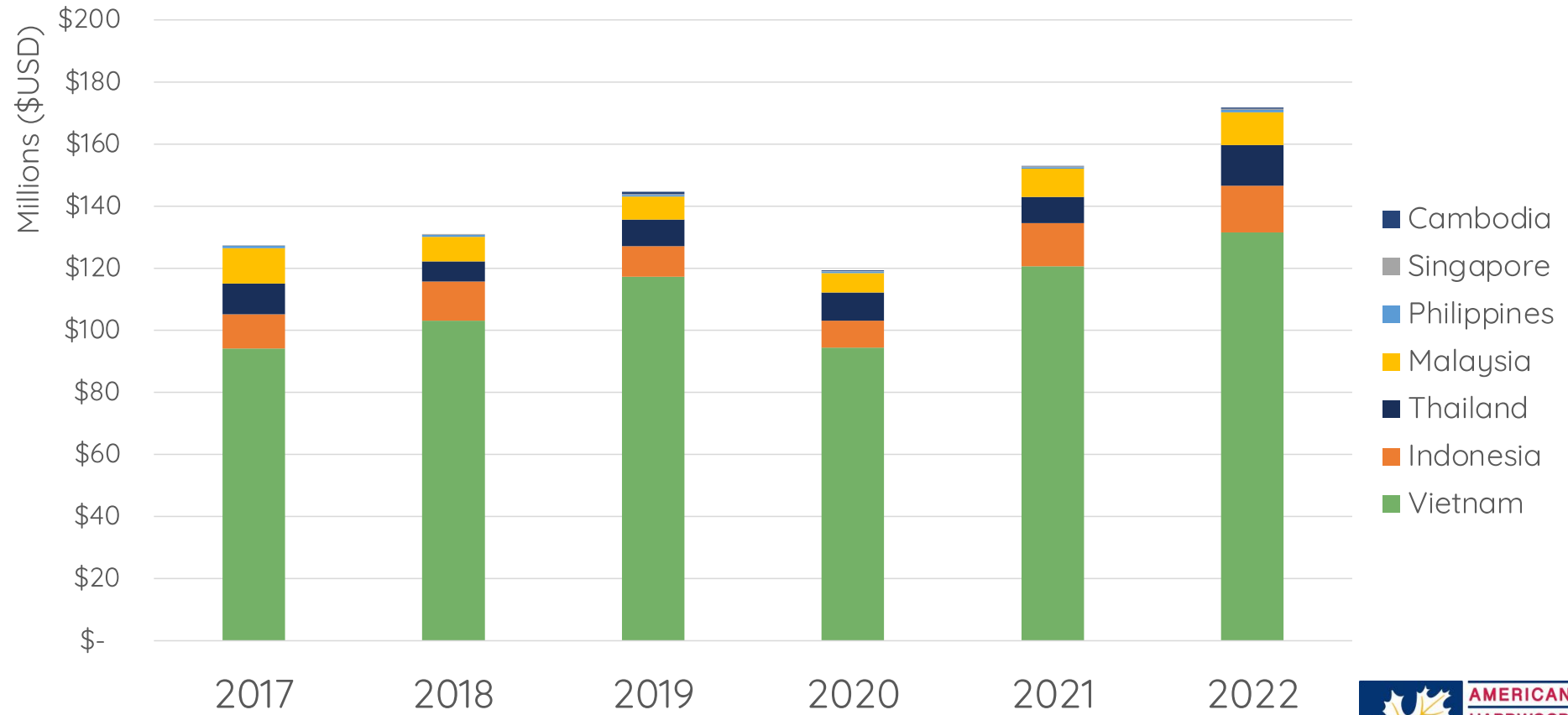
Exports to Major Markets Other than China & Canada



Source: USDA GATS, 2023 number annualized based on July data



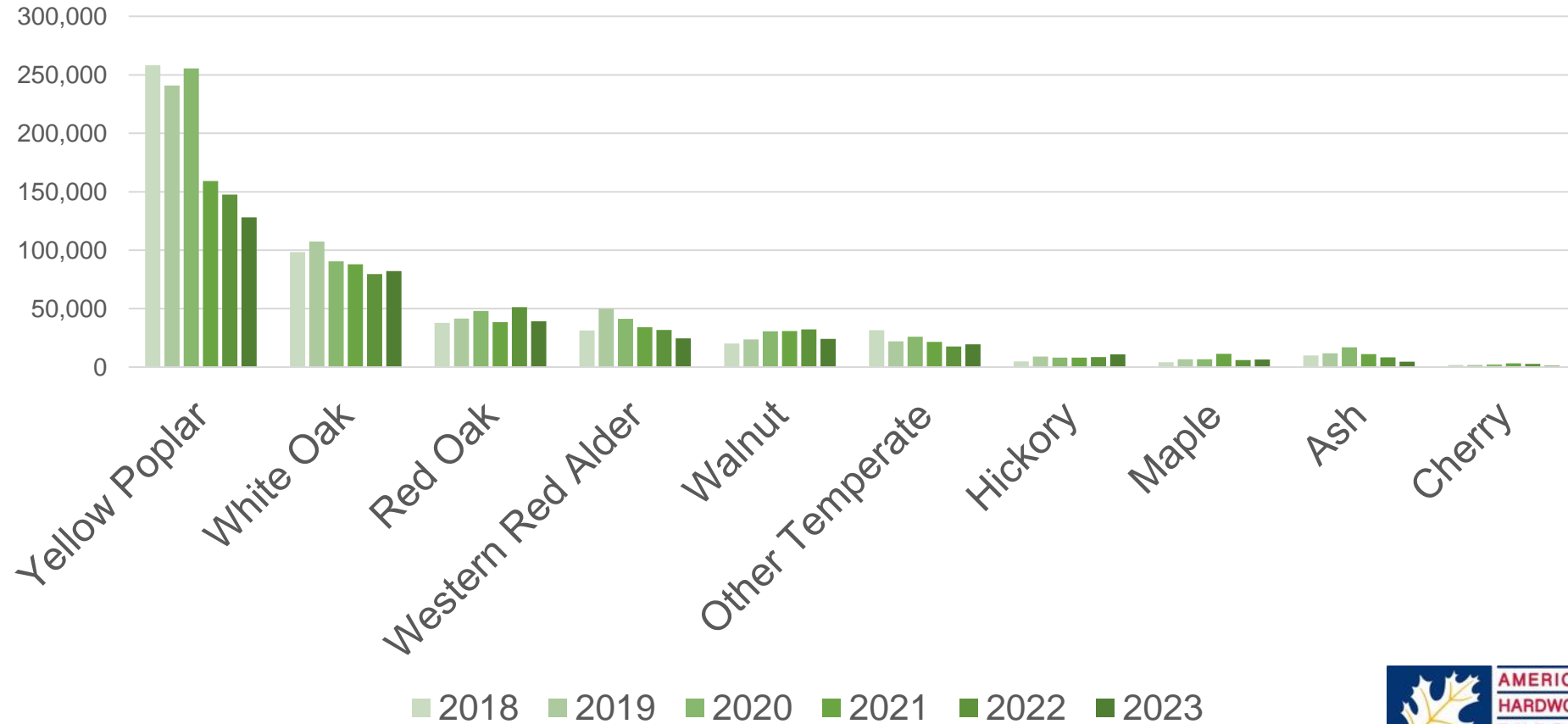
US Lumber to SE Asia



Source: USDA GATS, data for Jan-June each year



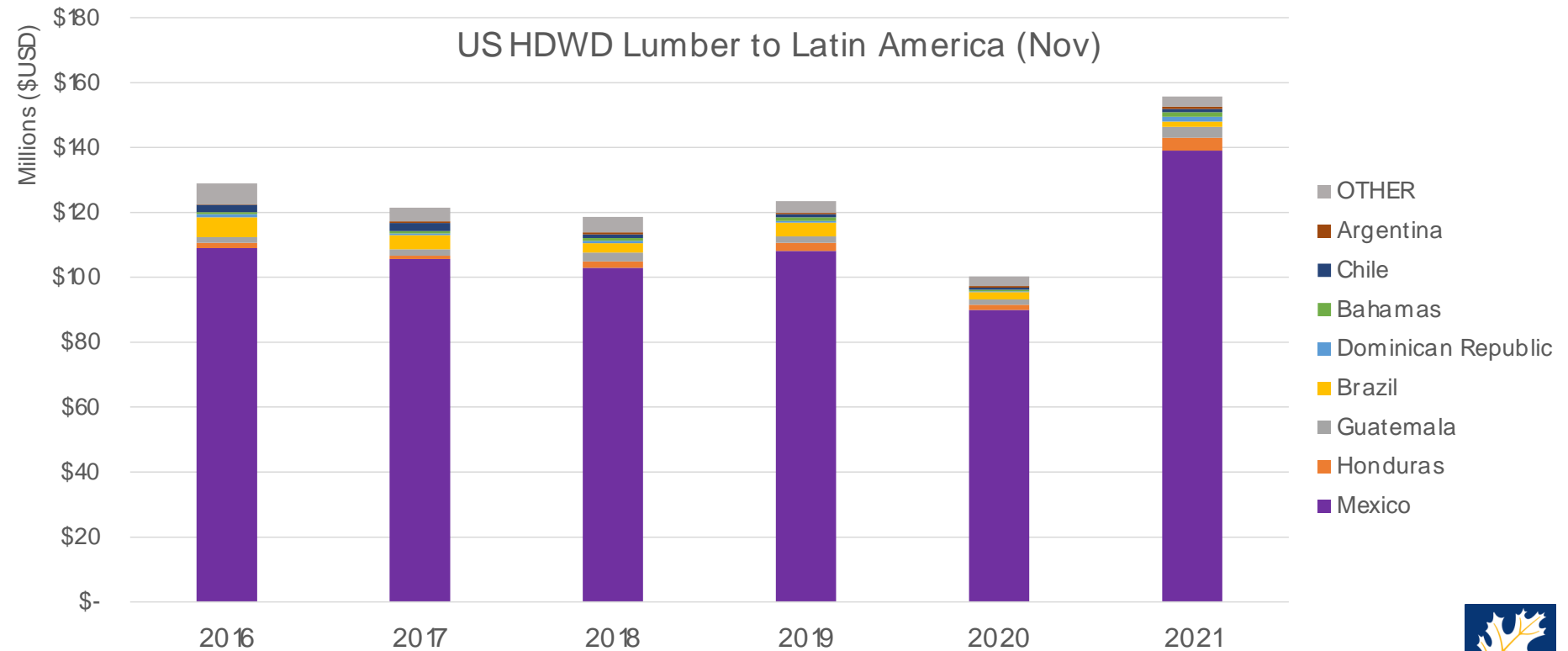
US Hardwood Lumber to Vietnam (m3)



Source: USDA GATS



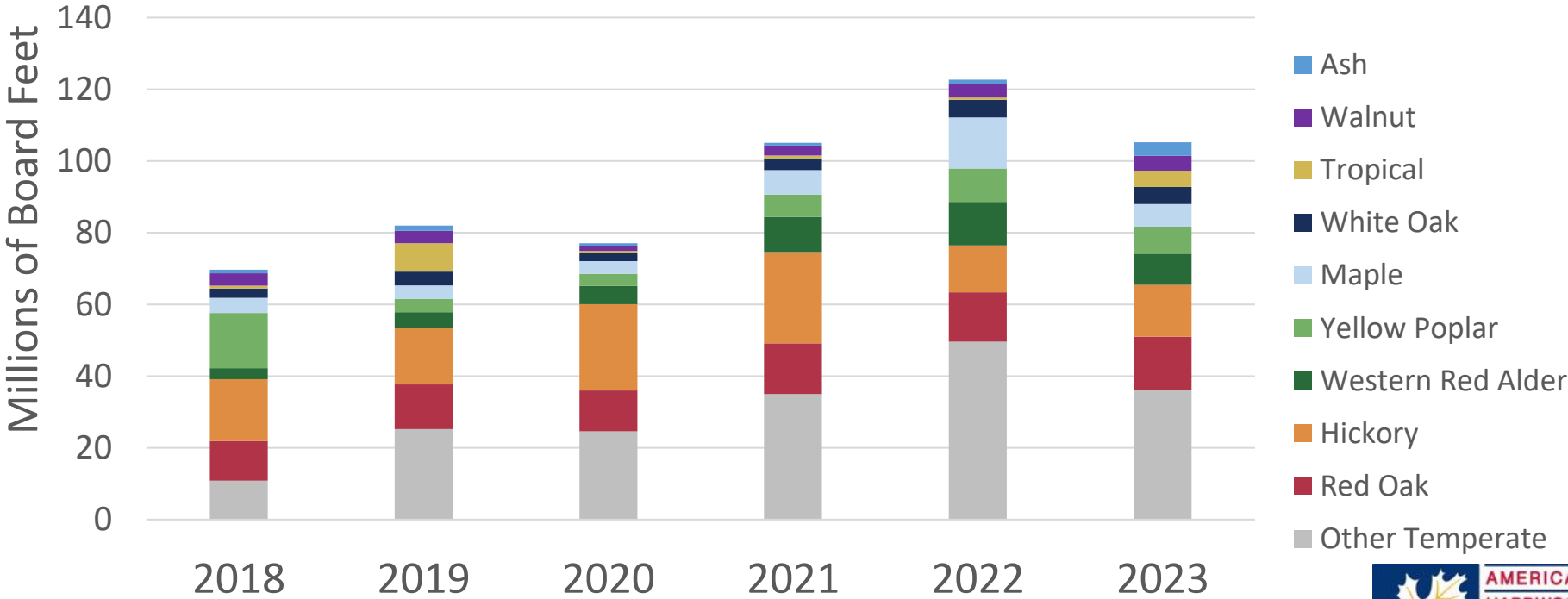
Mexico Dominates Latin America Trade



Source: USDA GATS (November)



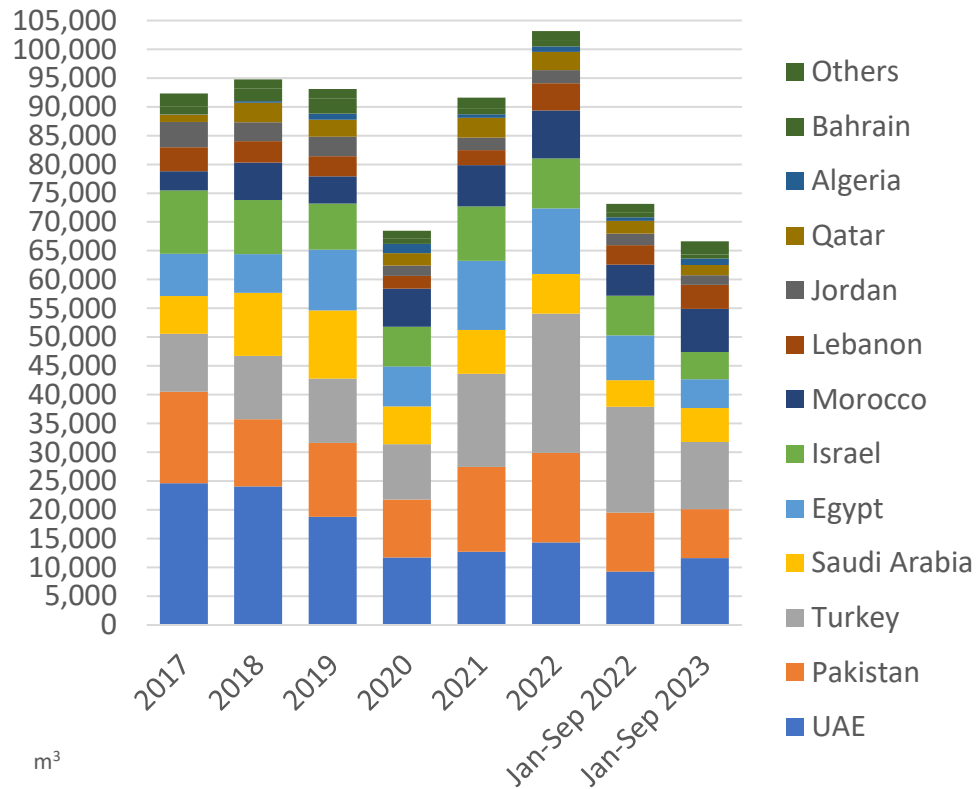
US Lumber to Mexico Volume BF



Source: USDA GATS, all years Jan-Sept Data



JAN-SEP 2023 U.S. HARDWOOD LUMBER EXPORTS (m³) – MENA & PAKISTAN



There was an 8% year-on-year decrease in the volume of shipments to the MENA region during the first nine months of 2023 to 58,110 cubic metres and an 11% decrease in value to USD 47.12 million.

At the same time, exports to Pakistan fell by 17% in volume and by 13% in value, owing to the on-going economic crisis the country is facing.

Shipments to the UAE, Saudi Arabia and Morocco were all up during the period, while exports to Egypt, Israel and Turkey were all down, due to economic uncertainty and, in the case of Egypt, another economic crisis.

As always, red oak dominated lumber shipments to the MENA region, accounting for over 55% of the total volume shipped during the period.

Source: USDA Foreign Agricultural Service





INDIA – HARDWOOD LUMBER END-USERS

The main hardwood lumber processing centres (furniture & handcraft manufacturers) are located in:

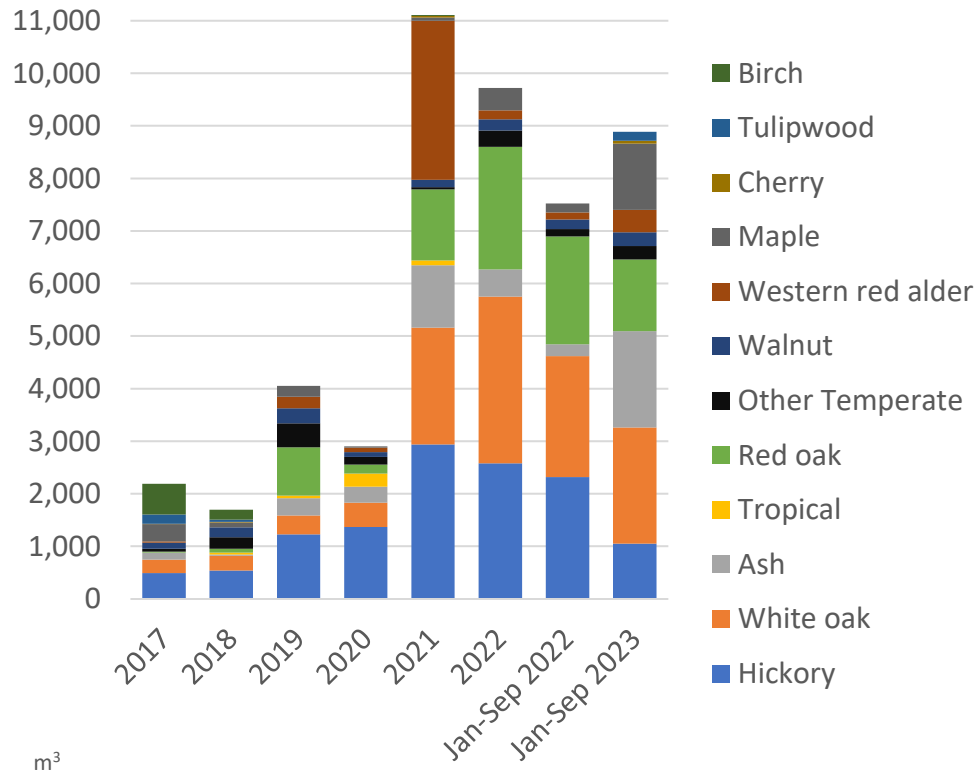
- Delhi-National Capital Region
- Jaipur & Jodhpur in Rajasthan
- Bengaluru (formerly Bangalore)
- Chennai (formerly Madras)

Manufacturers are located across the whole country, but other notable centres are:

- Mumbai & Pune
- Hyderabad
- Kolkata
- Ahmedabad (Ghandinagar)
- Lucknow
- Mysore (near Bengaluru)



JAN-SEP 2023 U.S. HARDWOOD LUMBER EXPORTS (m³) – INDIA



Source: USDA Foreign Agricultural Service

AMERICAN HARDWOOD EXPORT COUNCIL

An 18% year-on-year increase was seen in the volume of US hardwood lumber shipped to India during the first nine months of 2023, reaching 8,887 cubic metres.

2023 is on track to be a new record year for US hardwood lumber shipments to India.

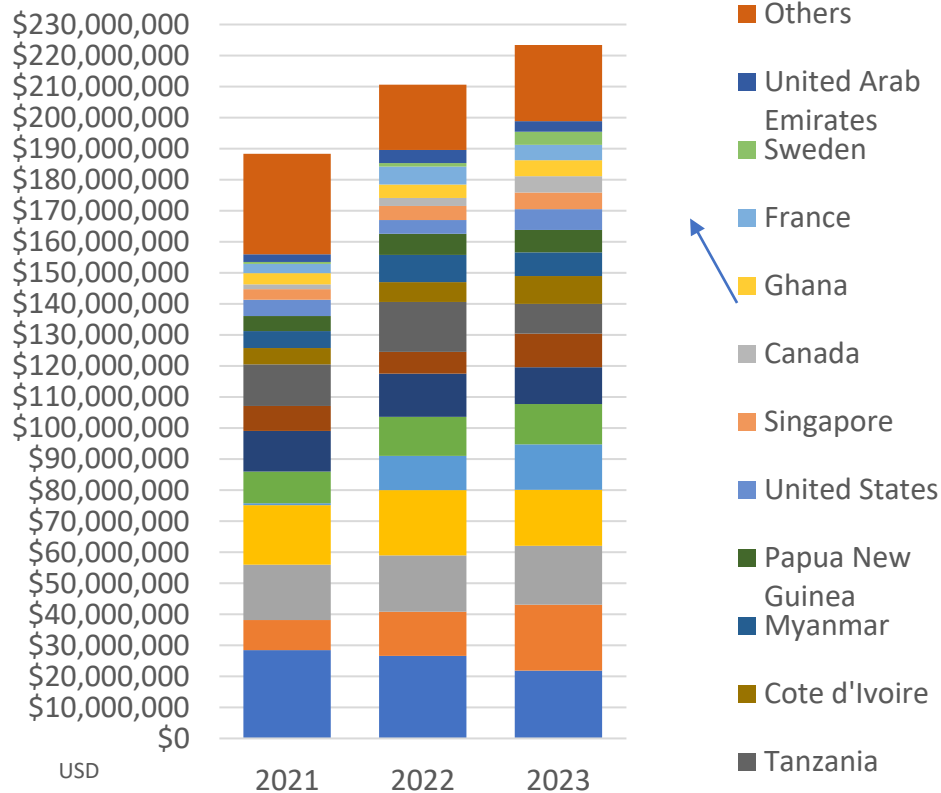
However, there was a 2% decrease in the value of shipments over the period, falling to USD 5.38 million.

White oak, ash, red oak and maple dominated exports, with both ash and maple shipments rising from a very small base in the previous year.

U.S. hardwood log exports to India fell by 28% in volume and by 41% in value during the same period.



JAN-SEP 2023 - INDIA'S HARDWOOD LUMBER IMPORTS (USD)



Source: Trade Data Monitor

According to Trade Data Monitor, India imported a record USD 225 million worth of hardwood lumber during the first three quarters of this year.

For the first time, India's imports of hardwood lumber exceeded its imports of hardwood logs, which have been falling steadily for the past decade.

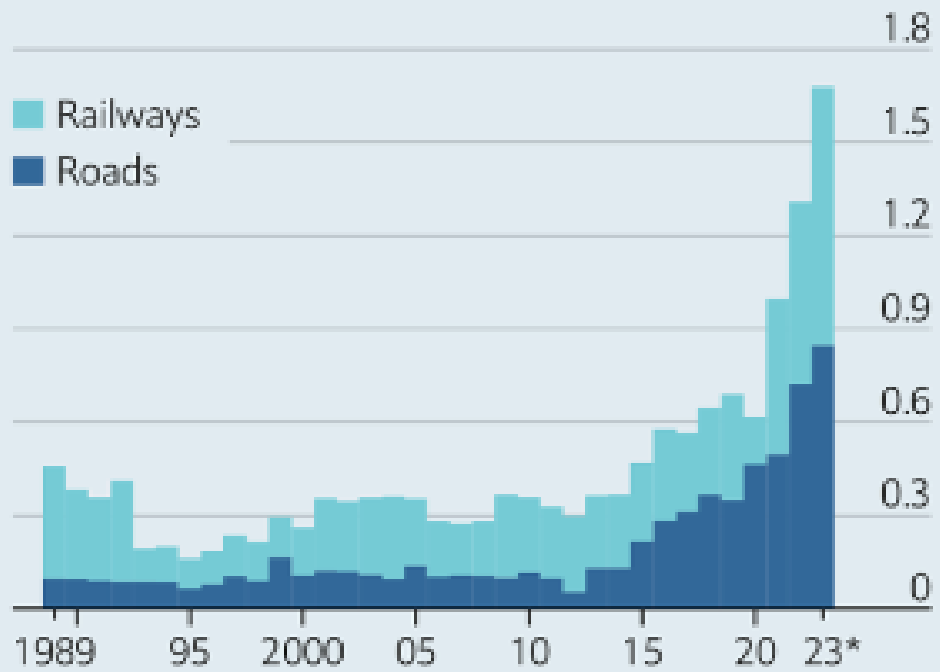
The US share of India's hardwood lumber imports during the period was only just over 2%.

India's main temperate hardwood lumber supplier was Germany.



Concrete objectives

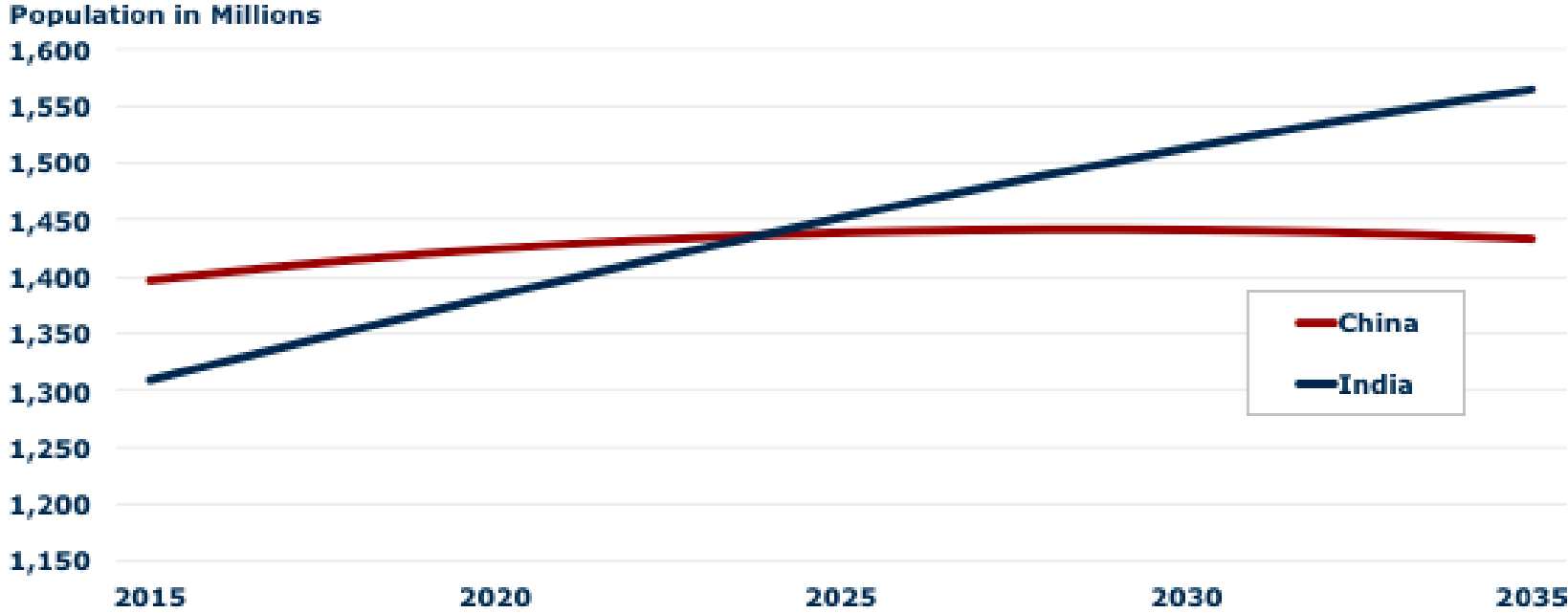
India, capital expenditure, % of GDP



Source: CMIE

*Forecast

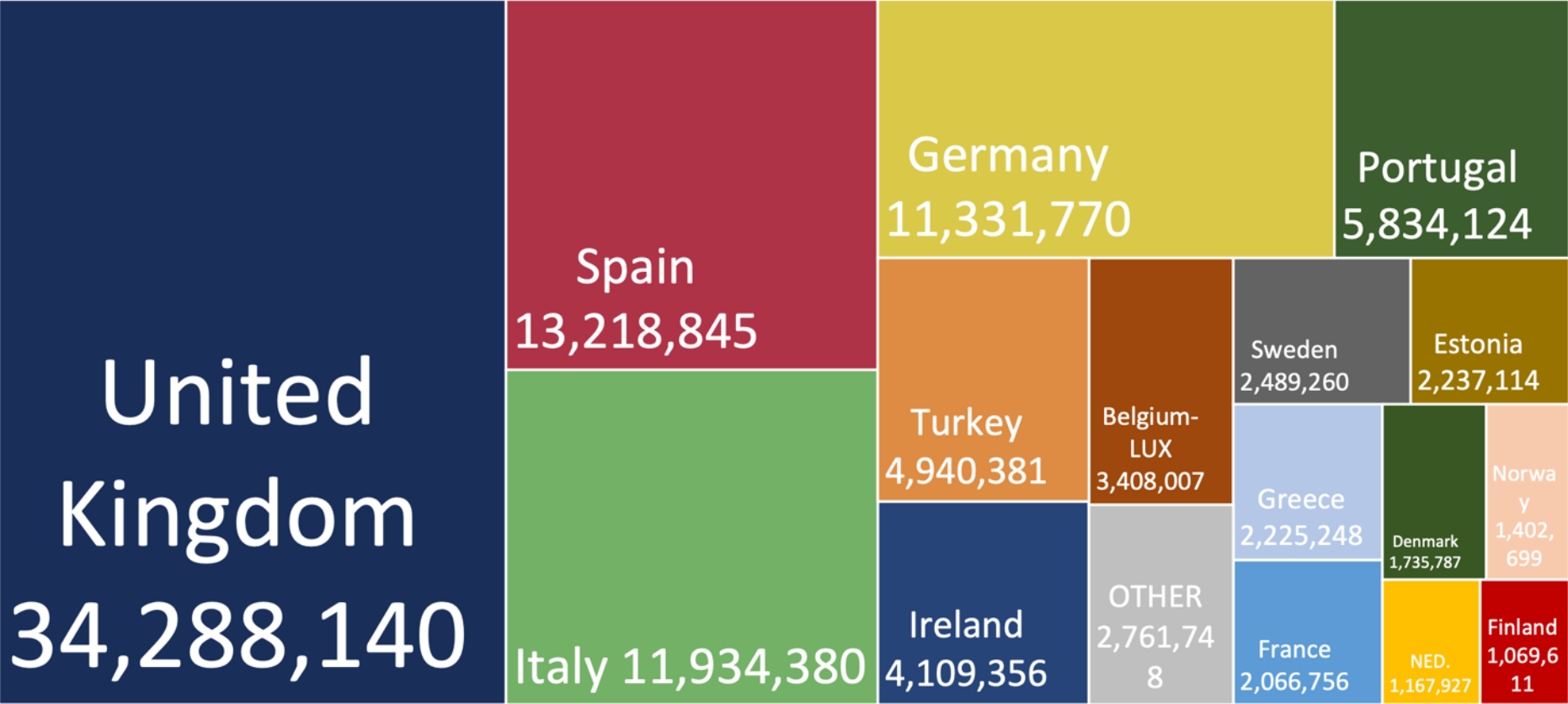
Population Growth in India Will Outpace China



Source: UN Population Division
Medium Variant Projections



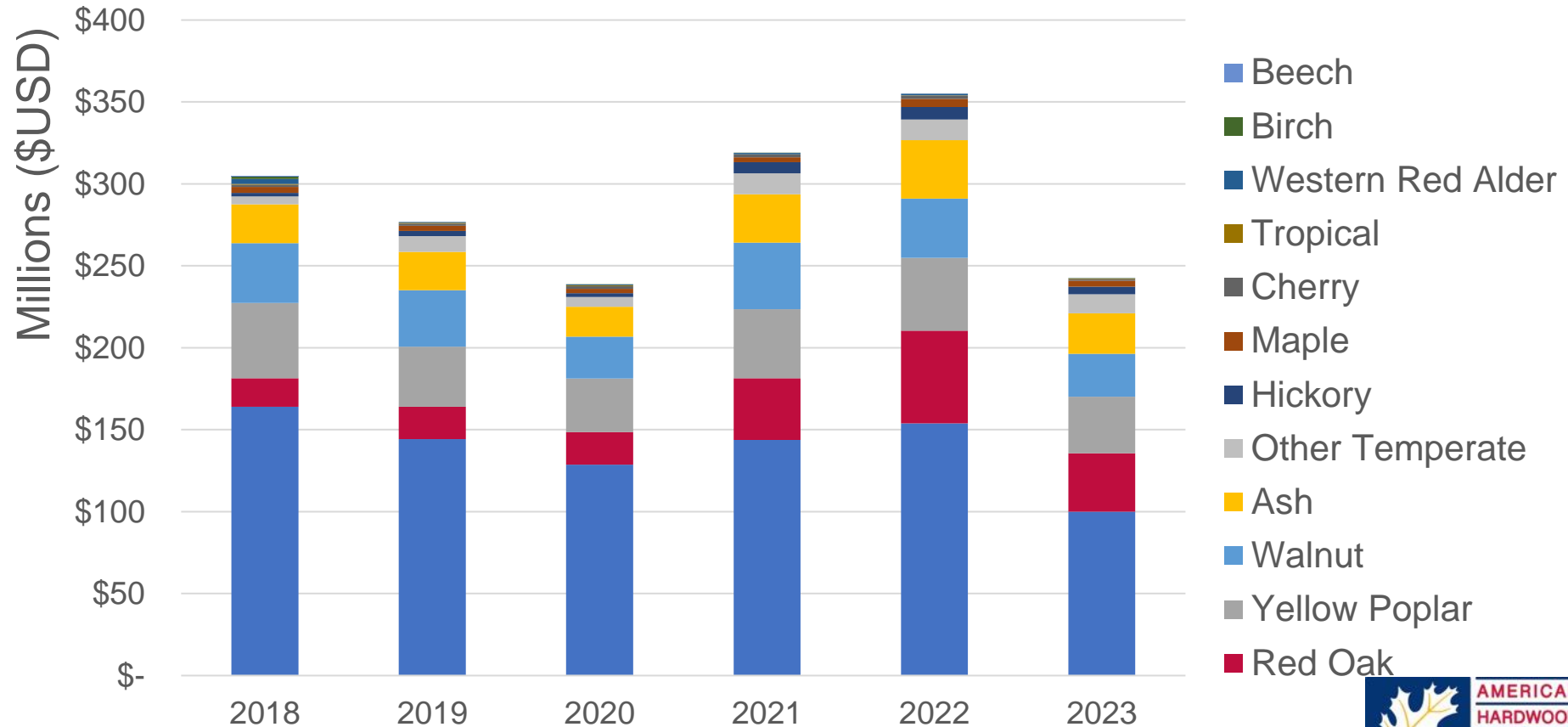
US Hardwood Lumber to Europe, 3Q 2023 in Board Feet



Source: USDA GATS, all years Jan-Sept Data



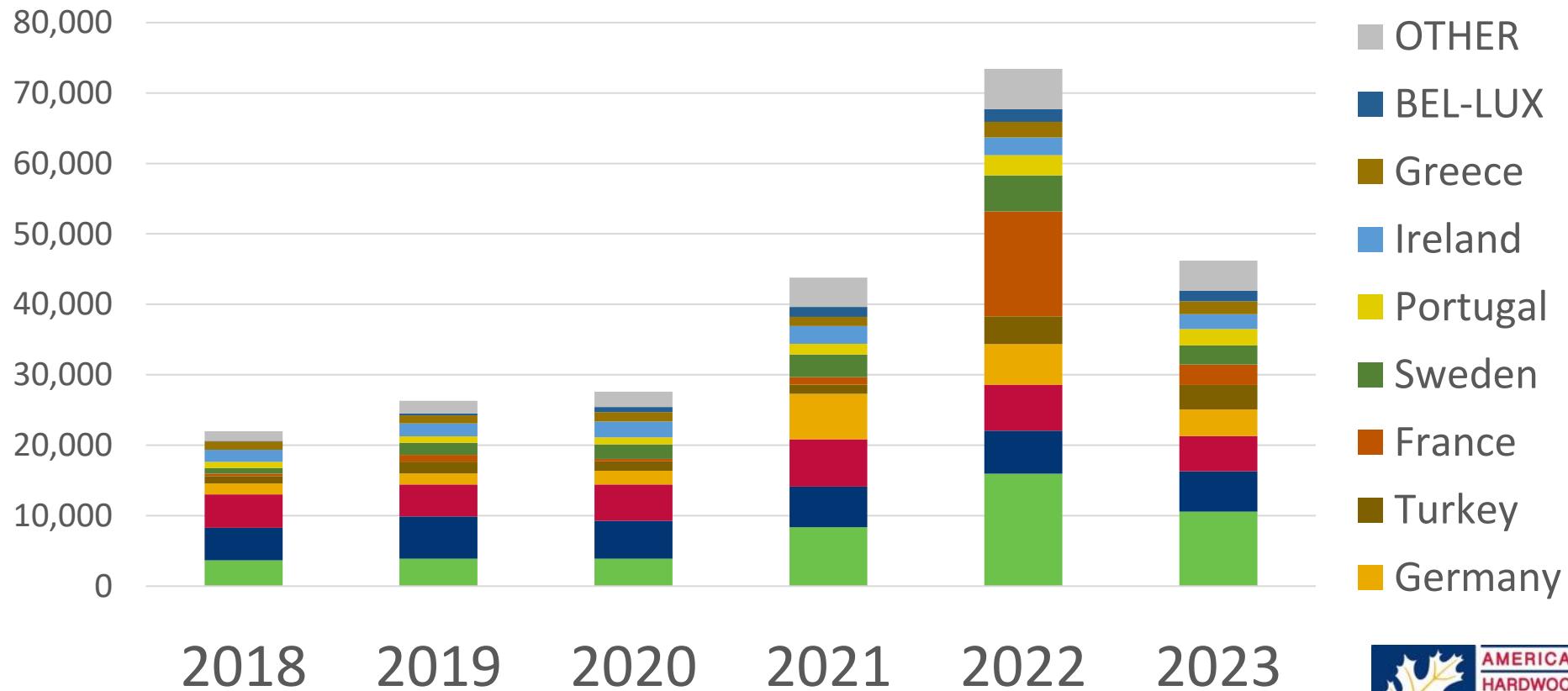
US Hardwood Lumber to Europe



Source: USDA GATS



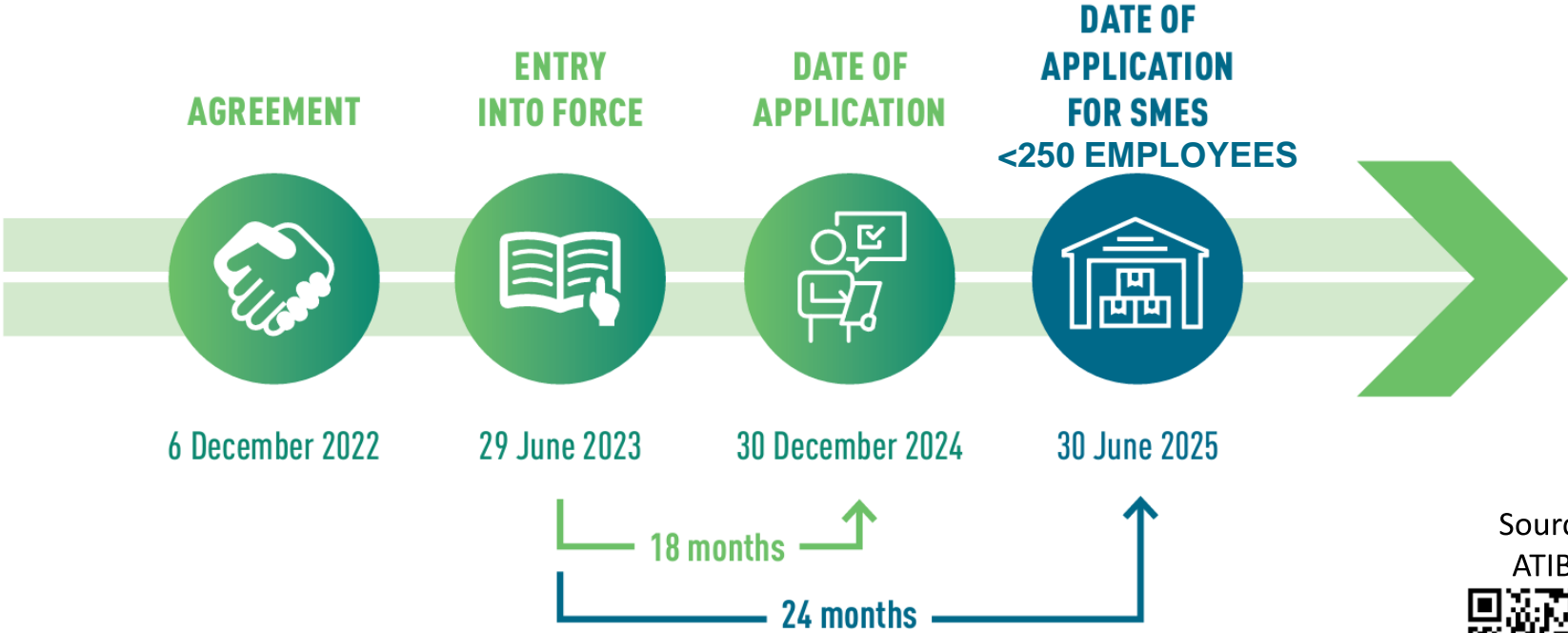
Red Oak Lumber to Europe (m3)



Source: USDA GATS



EUDR Timeline

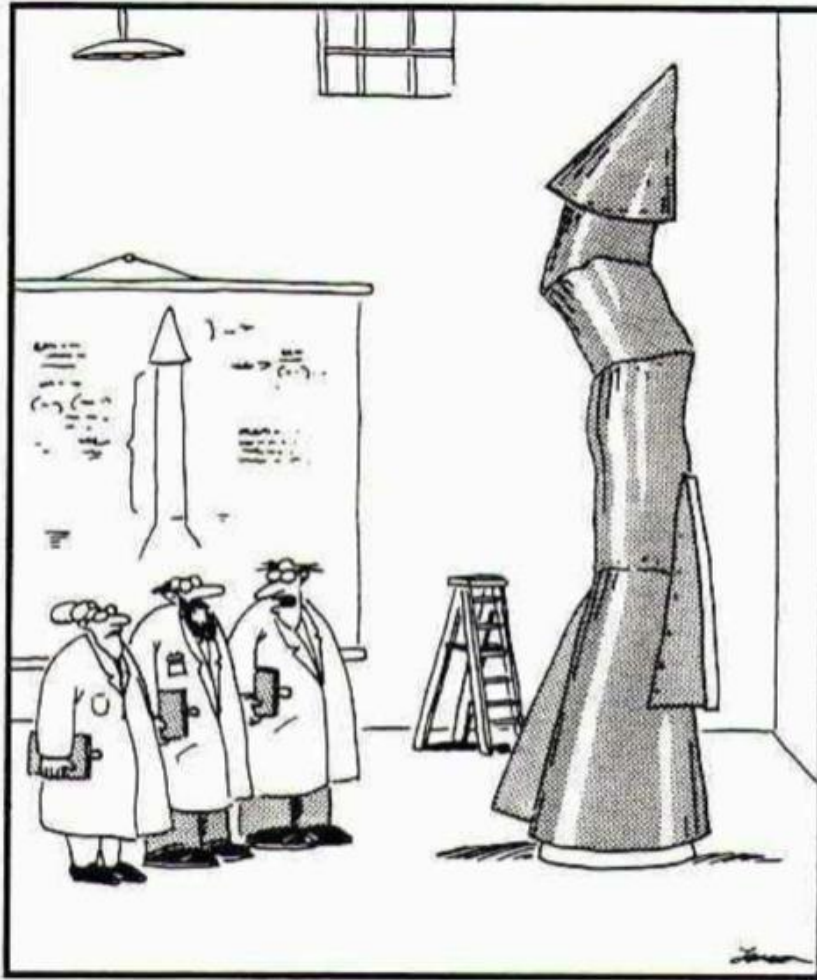


	EUTR (Current)	EUDR (New Law)
Products	Timber	Timber, cattle, cocoa, coffee, oil palm, rubber, soya
Prohibitions	Illegally Harvested	Illegally harvested, contrary to social law, deforested, degraded
Traceability	To Country of harvest, beyond that to <u>the extent necessary to demonstrate negligible risk</u>	Geolocation of "plot of land(s)" where harvesting took place with each consignment irrespective of risk



Pulp and Paper Markets

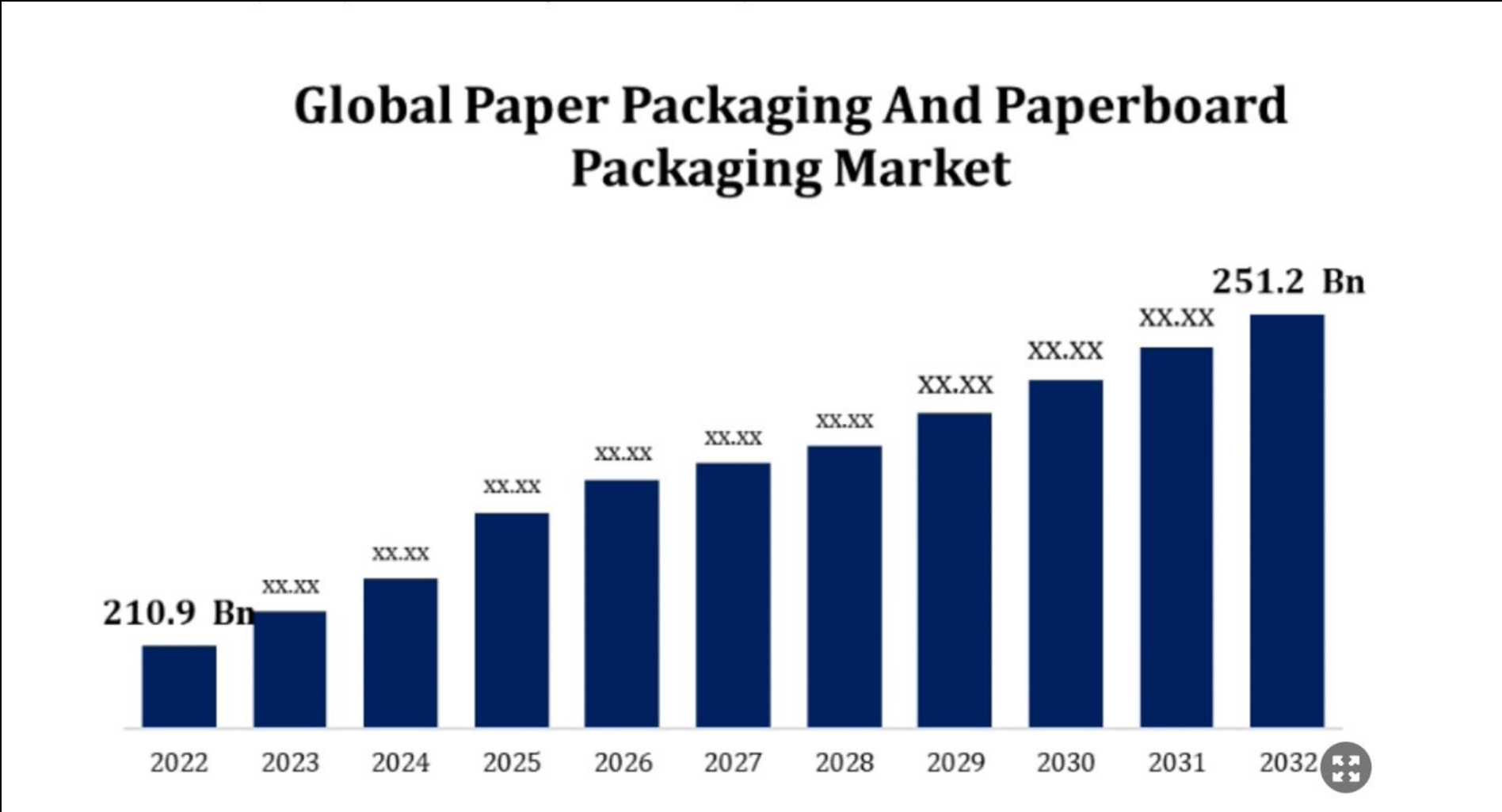
Pulp and Paper in WI



"It's time we face reality, my friends. ...
We're not exactly rocket scientists."

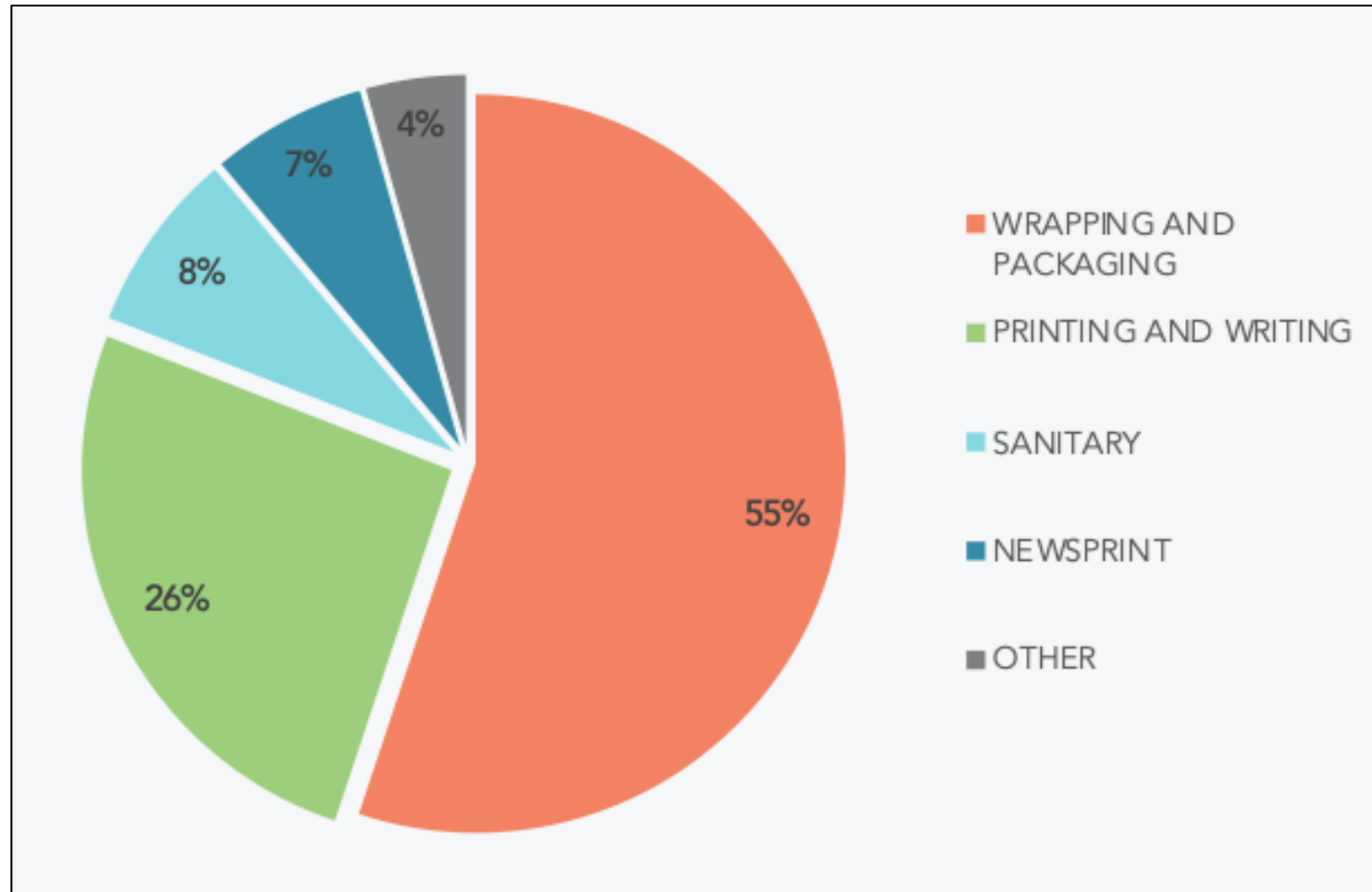
- The paper industry is complicated
- Just like softwood and hardwood markets, Paper markets are not bound by the borders of the state – It's Global!

Global Paper & Paperboard Packaging Market is estimated to be \$251.2 billion by 2032 with an average growth rate of 3.6%



Source: <https://www.globenewswire.com/>

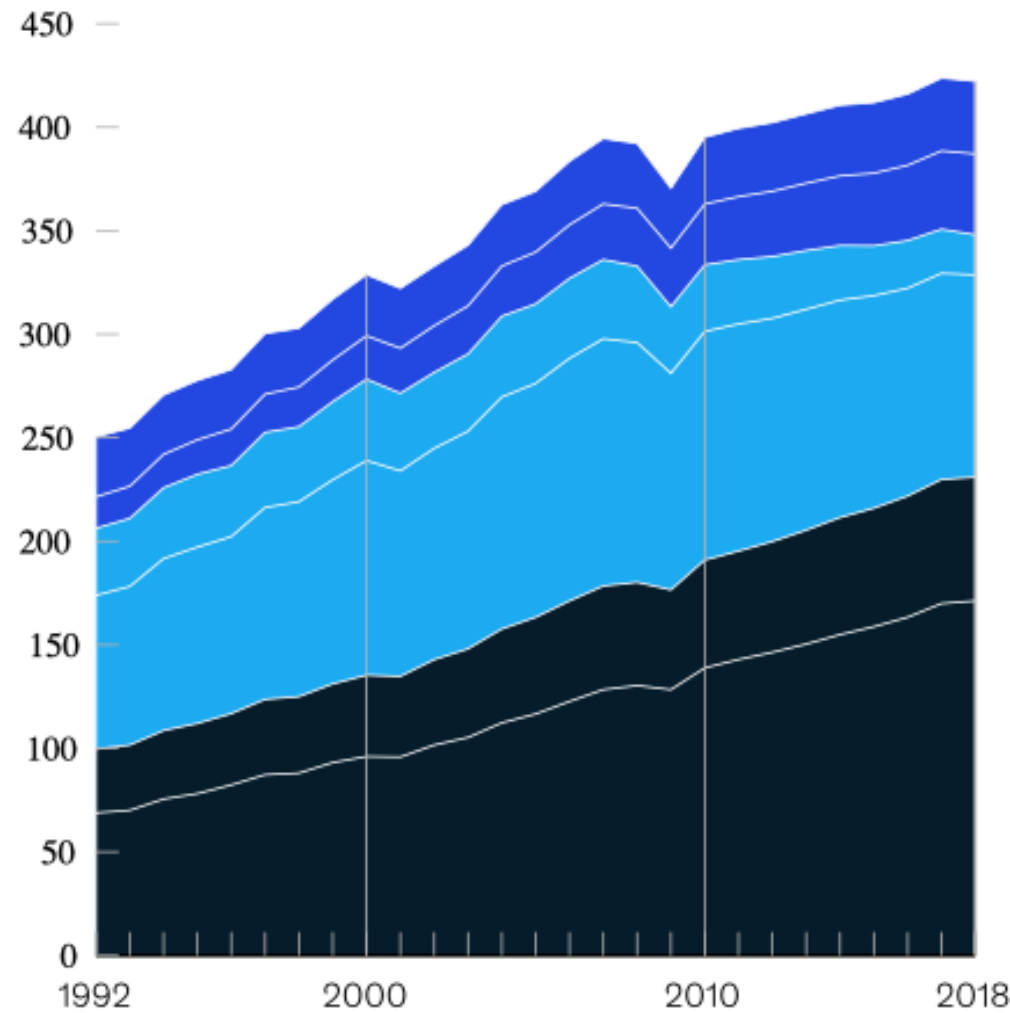
Global consumption by paper category?



(Source: EPN - State of the Global Paper Industry, 2018)

The global paper and paperboard industry continues to grow despite decline in the graphic-paper segment.

Global paper and paperboard market, million metric tons

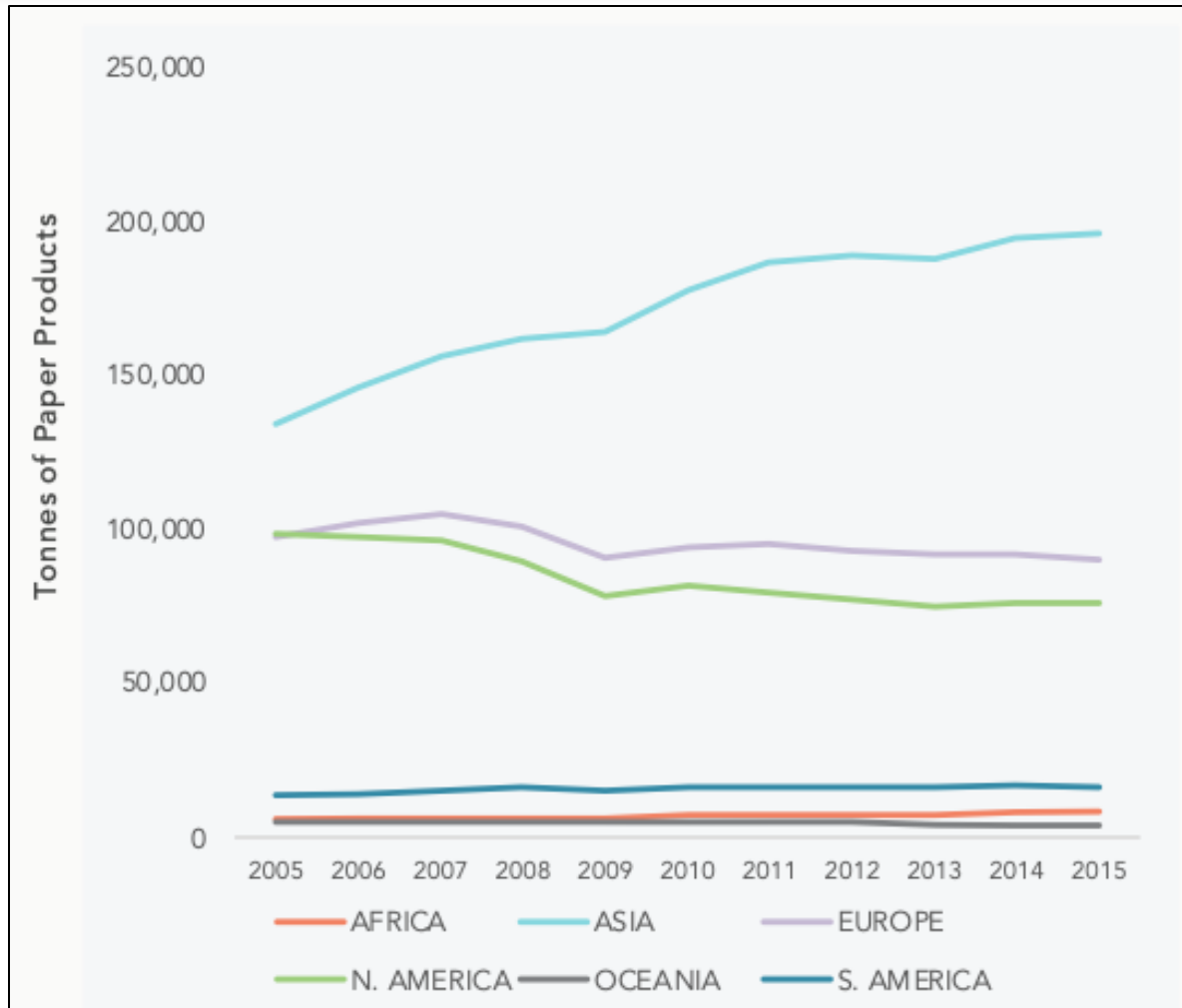


		CAGR, ¹ 1992–2007, %	CAGR, 2010–18, %
Other	Others	0.6	1.1
	Tissue	3.9	3.6
Graphic paper	Newsprint	1.1	-6.1
	Printing and writing	3.2	-1.5
Packaging	Carton-board	3.3	1.7
	Container-board	4.3	2.7
Average per annum		3.0	1.0

¹Compound annual growth rate.

Source: Resource Information Systems Inc (RISI), Feb 2019

Paper Consumption by Region



Avg: 55kg/yr
NA: 215kg/yr
Europe: 147kg/yr
China: 76kg/yr
India: 9kg/yr

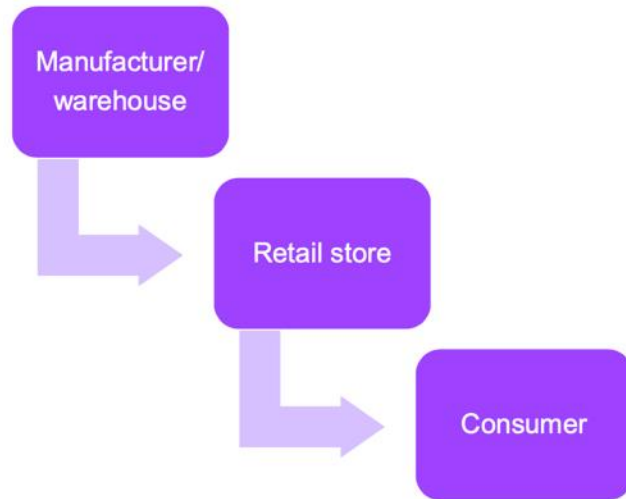
(Source: EPN - State of the Global Paper Industry, 2018)



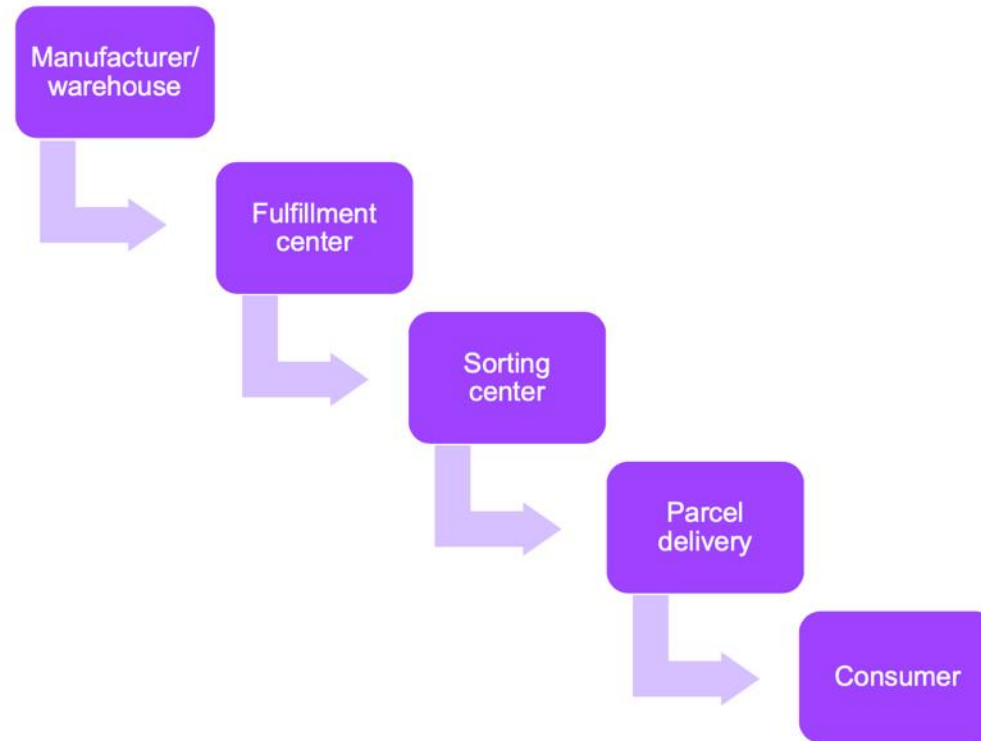
E-commerce retail uses seven times more corrugated per dollar than traditional retail



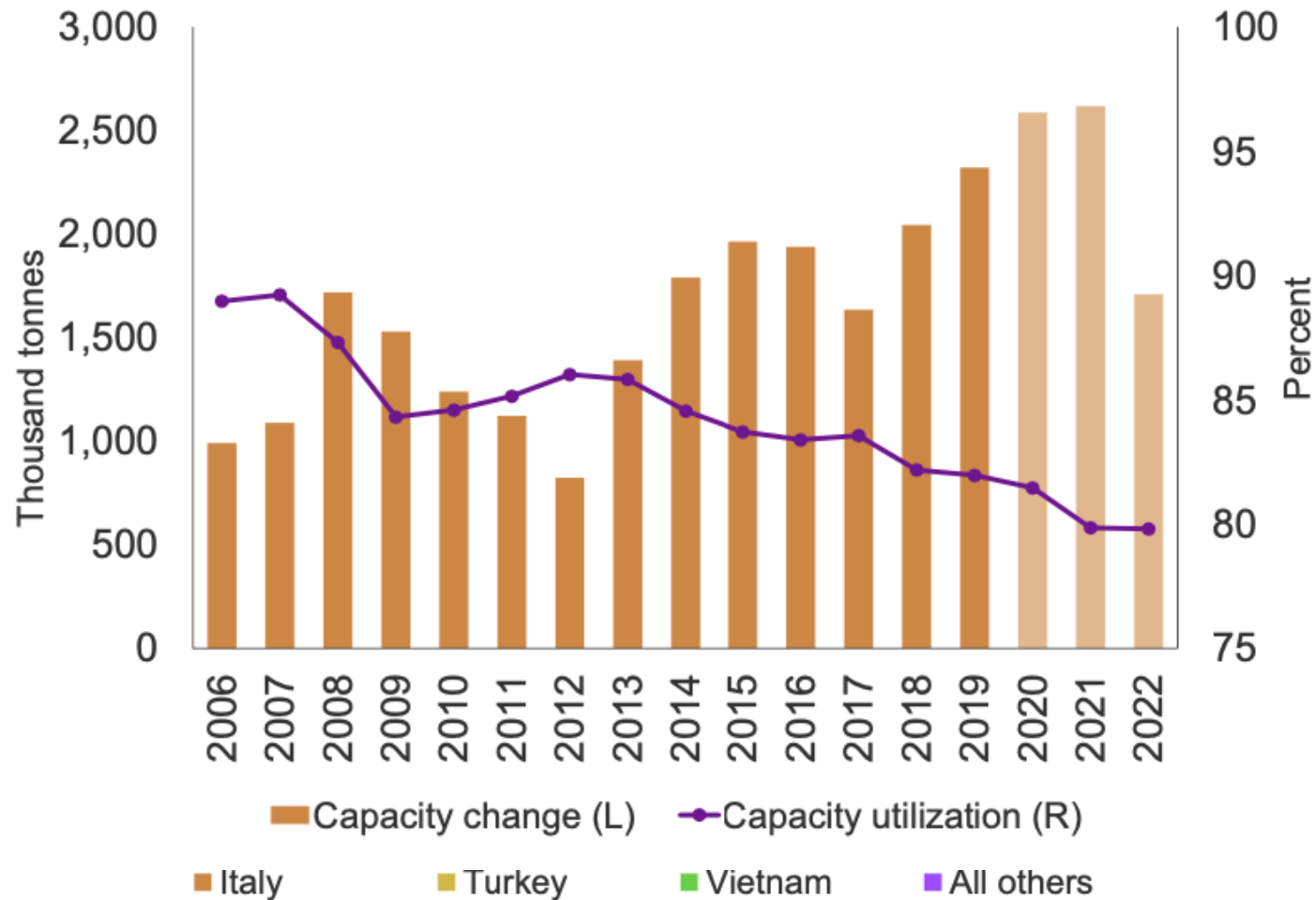
BRICK-AND-MORTAR LOGISTICS



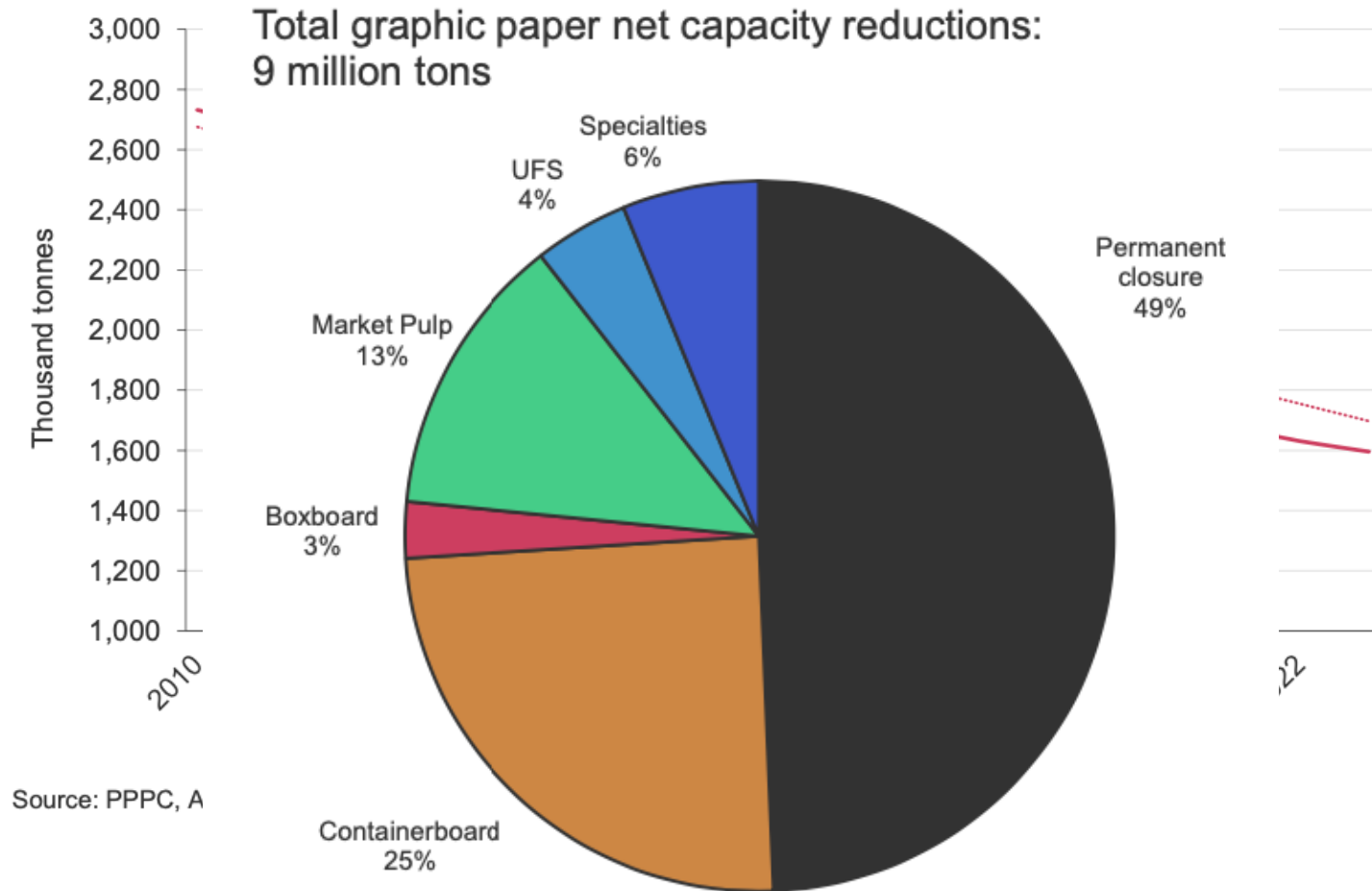
E-COMMERCE LOGISTICS



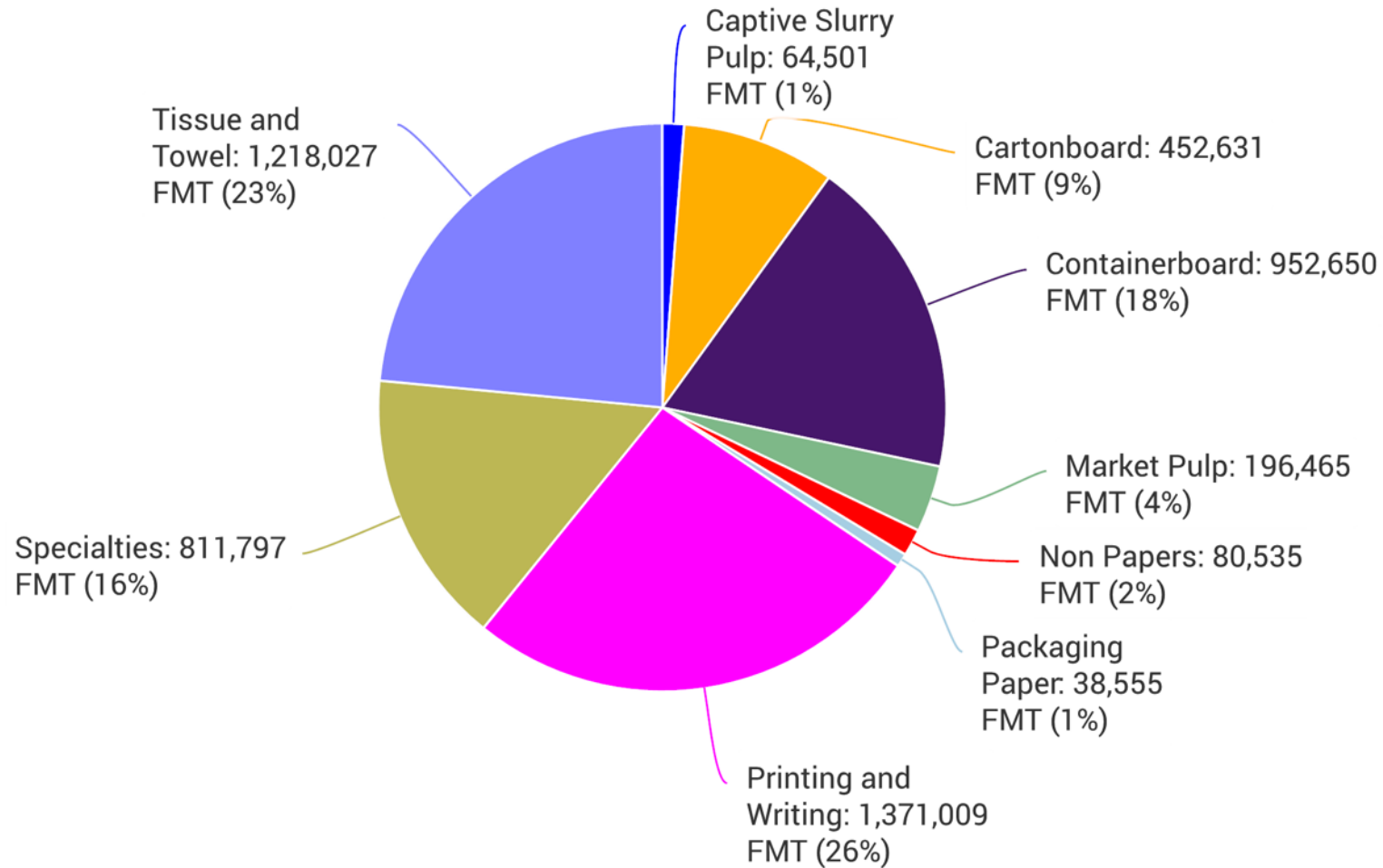
Tissue Growth & Capacity



Writing Paper



Diversity of pulp & paper production in WI



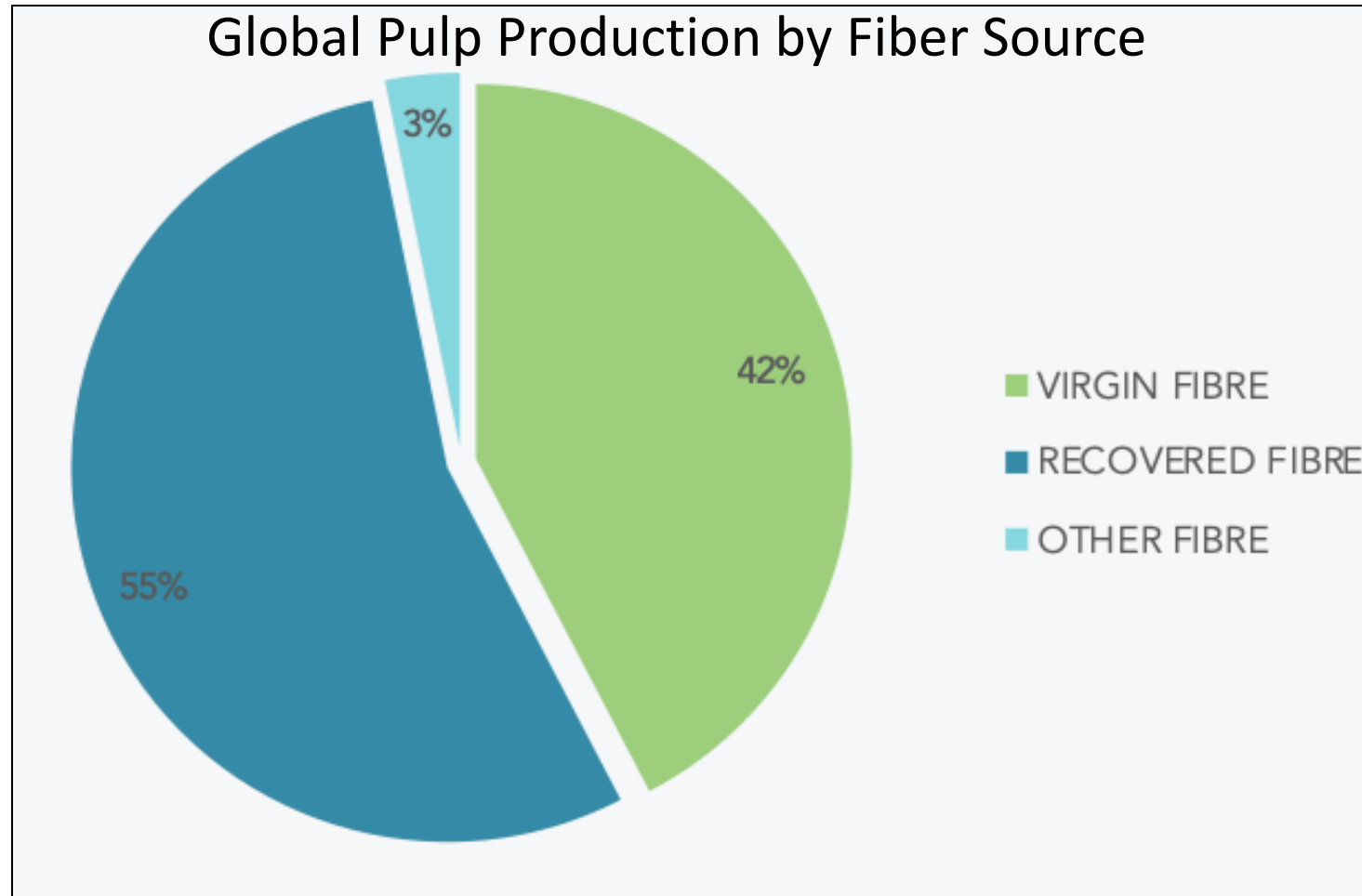
(Source: Wisconsin Institute of Sustainable Technology, 2019)

Specialty Papers in Wisconsin



(Source: Wisconsin Paper Council - www.wipaper.org)

Where does recycled fiber fit?



(Source: EPN - State of the Global Paper Industry, 2018)

Future for Pulp & Paper

- Be vigilant and watch for the declining market segments.
- Build upon our strengths - specialty and packaging:
 - Market pulp
 - Food packaging & virgin fiber

Closing Remarks

- Healthy forests depend upon a healthy forest industry!
- We live and operate in a global marketplace.
- Domestic markets driving hardwood and softwood lumber.
- Expanding pulpwood options is an important goal for Wisconsin.

Wood Markets Update

Questions?

Scott Bowe
Professor and Wood Products
Extension Specialist
sbowe@wisc.edu
715-892-0391



Kemp Natural Resources Station
COLLEGE OF AGRICULTURAL & LIFE SCIENCES
UNIVERSITY OF WISCONSIN-MADISON

A photograph of a large stack of cut logs in a forest. The logs are stacked in a neat pile, with the ends of the logs facing the camera. The background is a blurred green forest. The text is overlaid on the left side of the image.

MASTER LOGGER CERTIFICATION

Sustainable Forestry Conference
April 17, 2024

About the Master Logger Certification Program

Recognizing Excellence in Sustainable Forestry Practices

The Master Logger Certification Program is a voluntary third-party certification program that recognizes logging companies that meet or exceed the sustainable forest management standards set forth by the American Loggers Council.

Master Logger Certification Program Seven Areas of Responsibility

1. Protection of water quality and soils
2. Compliance with government regulations appropriate to a logging business
3. Conformance with acceptable silviculture and utilization standards
4. Adherence to state-specific logger training standards
5. Application of aesthetic management
6. Implementation of site-specific management plans that are agreed to by the landowner
7. Use of sound business management practices

Master Logger Benefits

What are the benefits of becoming a Master Logger?

While benefits can vary between the Wisconsin and Michigan Master Logger programs, common benefits include:

- Statewide and national recognition
- Enhanced company recognition and marketing opportunities
- Discounts on certain insurance lines
- Increased preference from private landowners and select mills
- Third party certification
- Access to arbitration support for client complaints
- Publicly listed online in the Master Logger directory
- Access to Master Logger newsletter covering industry issues and opportunities
- Access to the SRI FSC® Group Chain of Custody Certificate*
*eligible to companies with less than \$5 million in gross annual forest product sales

Becoming a Master Logger

I am interested...

Who is eligible to become a Master Logger?

Candidate Eligibility Requirements

- Own a logging business (must be a sole proprietorship or other legal business structure that purchases stumpage and controls the on-site timber harvesting operation)
- Be an independent contractor
- Own or operate in-the-woods harvesting equipment

I'm eligible, what are the next steps?

Steps to Certification

- Complete and submit an application and application fee
- Preliminary certification interview
- Field certification audit of three of your timber sales
- Audit review and feedback
- Anonymous Master Logger Board audit review
- Ongoing participation in the recertification process

To learn more:

Contact

Brock VanOss
MI + WI Program Coordinator
(906) 874-0777

Visit

MI Master Logger: mimlc.com
WI Master Logger: wimlc.com

A Program For Loggers, By Loggers

The Master Logger Certification Program template was created and is maintained by the American Loggers Council (ALC). State-specific programs can utilize the Master Logger Certification Program template and be approved by the ALC. Each Master Logger Program standards and procedures are overseen by a Master Logger Committee, consisting of elected Master Logger members.



Sample Audit Form



MICHIGAN MASTER LOGGER FIELD AUDIT FORM - CERTIFICATION

(Three Sales)
Updated: April 3, 2024

Applicant's I.D. #:		Date Audited:	
Field Verifier's I.D. #:	Acres:	Site I.D.:	

The purpose of this form is to document an applicant's field compliance and conformance with standards and practices that have been adopted for the Master Logger Certification program in Michigan. Fill out a separate checklist for each site audited. A minimum of one active job is required. Standards are evaluated as of current on active jobs. For technical information, refer to the Michigan BMP Practices handbook, and the Wisconsin Forest Management Guidelines handbook. Silvicultural information is available in the Wisconsin DNR Silviculture and Aesthetics Handbook, Form 2431.5.

Job Overview	
Job Type: <input type="checkbox"/> Active <input type="checkbox"/> Inactive <input type="checkbox"/> Complete	Ownership: <input type="checkbox"/> Private <input type="checkbox"/> QF <input type="checkbox"/> Tree Farm <input type="checkbox"/> Landowner <input type="checkbox"/> Industry <input type="checkbox"/> County <input type="checkbox"/> State <input type="checkbox"/> USFS <input type="checkbox"/> Other (Explain):

Type of Harvest/Species:	Visual Sensitivity
<input type="checkbox"/> Uneven <input type="checkbox"/> Even > Shelterwood <input type="checkbox"/> > Clearcut <input type="checkbox"/> > Seed Tree <input type="checkbox"/> <input type="checkbox"/> Intermediate <input type="checkbox"/> Land Use Change <input type="checkbox"/> Type Conversion Explanation (if necessary)	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High Water & Soil Conditions: <input type="checkbox"/> None <input type="checkbox"/> RMZ <input type="checkbox"/> Wetland <input type="checkbox"/> Stream Crossing <input type="checkbox"/> Rock Outcrops <input type="checkbox"/> Soil Condition (please Describe)
	Cutting Method: <input type="checkbox"/> Hand <input type="checkbox"/> Hand Felling Review Sheet completed for this sale <input type="checkbox"/> Machine-CTL <input type="checkbox"/> Machine-Tree Length <input type="checkbox"/> Machine Specifics Review Sheet completed for this sale

Topography:	Type of Sale:	Roads:
<input type="checkbox"/> Steep Slopes <input type="checkbox"/> Rolling <input type="checkbox"/> Level	<input type="checkbox"/> Forester Marked Sale <input type="checkbox"/> Forester Unmarked Prescription Sale <input type="checkbox"/> Logger's Choice Sale <input type="checkbox"/> Logger's Forester Marked Sale	<input type="checkbox"/> New <input type="checkbox"/> Pre-existing (Used As Is) <input type="checkbox"/> Pre-existing (Upgraded) <input type="checkbox"/> No Roads (Skidding Only)

Harvesting Activities Conducted By:	Goal and Future Desired Condition of the Timber Sale Area:
<input type="checkbox"/> Applicant <input type="checkbox"/> Employee(s) <input type="checkbox"/> Independent Contractor(s)	

SITE INSPECTION INSTRUCTIONS:

Using the following code, respond to each standard:

CE* Consistently Exceeds	IM* Inconsistently Meets	NL Not Logger's Responsibility
PE* Periodically Exceeds	NM* Does not meet	NV Not Observed/Viewed
M Meets	NA Not Applicable/Logger not evaluated on standard	

1. SOIL AND WATER	
A.	ROADS
B.	LANDINGS
C.	SKIDDING/FORWARDING
D.	STREAMS AND STREAM CROSSINGS
E.	RMZS AND WETLANDS
F.	SPILLS

2. MANAGEMENT PRACTICES	
2.A.	TIMBER SALE CONTRACT
2.B.	HARVEST PLAN
2.C.	SILVICULTURAL GUIDELINES
2.D.	UTILIZATION
2.E.	OPERATION
2.F.	AESTHETICS AND OTHER MANAGEMENT CONCERNS
2.G.	WILDLIFE/BIODIVERSITY
2.H.	WOODY BIOMASS HARVESTING

3.A. SAFETY

Hand Felling Operation (One Column Per Feller)

S1	S2	S3		
			Adequate Notch Opening	M, NM, NV
			Notch Cuts Match	M, NM, NV
			Adequate Hinge	M, NM, NV
			Feller is Safely Away from Tree as it is Falling	M, NM, NV

S1	S2	S3		
			Chainsaw has Proper Safety Features	M, NM, NV
			First Aid Kit Availability	M, NM, NV
			Starting Technique	M, NM, NV
			Safe Delimiting (Operating on Opposite Side of Tree or with Feet Planted)	M, NM, NV

Machine (One Per Machine)

State the type of Machine referred to in each column: M1: _____ M2: _____ M3: _____

M1	M2	M3		
			Seat Belts Installed	M, NM, NV
			Seat Belts Used	M, NM, NV
			Blade, grapple, or cutting head is on Ground when Machine is Parked	M, NM, NV
			All Stored Energy is Released on Parked Machines (Lockout)	M, NM, NV

M1	M2	M3		
			Spill Kit	M, NM, NV
			Hydraulic Hose Maintenance	M, NM, NV
			Fire Extinguisher on Machine was Properly Charged	M, NM, NV
			No Debris on Machine (Fire Hazard)	M, NM, NV
			First Aid Kit Availability	M, NM, NV
			Hard Hats PPE	

Michigan Master Logger Projects

Landscape Scale Restoration

This project will provide financial incentives for installation of select BMPs, support field audits and training on BMPs for soil and water quality

- Trainings and financial incentives will be provided for restorative BMPs including trail armoring, installation of native seed on abandoned landings and closed roads, and silt fence.
- Trainings focused on BMPs that reduce sedimentation to water resources and improve water quality.

Forest to Mi Faucet in the Lower Great Lakes

This project helps support programming, promotion of Master Loggers, and is seeking to expand the MI Master Logger Program below the 43 parallel.



Michigan Portable Bridge Program

Portable Bridges for Michigan

Project Objectives

Provide temporary bridges to MI Master Loggers for use on private lands. Currently MI DNR has portable bridges which are available for use on public lands.

Advisory Team Members

Michigan Association of Timbermen

- Justin Knepper

Sustainable Resources Institute, Inc.

- Kari Divine
- Paul Irving

VanOss Forestry Services, LLC

- Brock VanOss

Michigan Department of Natural Resources

- Mike Smalligan
- Jennifer Burnham

Michigan Master Loggers

- TBD



Portable Bridge Project Details

Project Objectives

- Purchase portable bridges for Michigan Master Loggers to use on private forests
- Train Master Loggers on how to transport, install, and remove portable bridges

Project Budget

Breakdown of the FY 22 Federal Funds

The MI DNR and Sustainable Resources Institute, Inc. are under contract for the 2022 federal funding of \$175,000 for the portable bridge program. Anticipated funding for 2023 is \$300,000, and possible funding of \$600,000 for 2024.

Rental Program

No cost rental program, bridges will be owned by the Sustainable Resources Institute, Inc.

Bridges to be stored on Master Logger property in the Upper Peninsula and Northern Lower Peninsula

Category	Federal Funds
Personnel	
Fringe Benefits	
Travel	
Equipment – Purchase Portable Bridges	\$145,000
Supplies (Up to 10% for maintenance of bridges and up to 10% for training)	\$10,000
Contractual (Up to 10% for administration)	\$17,500
Construction	
Other	
Total Direct Charges	\$172,500
Indirect Charges of 10% (administration)	\$2,500
Totals	\$175,000

Portable Bridge Project Timeline

Spring/Summer 2024

- Identifying what kind of bridge(s) are needed by loggers – take our survey @ <https://www.surveymonkey.com/r/VKFHQYR>
- Request for Proposals for design & construction

Fall/Winter 2024/25

- Design & construction of bridges
- Development of rental agreement terms
- Identification of storage locations
- Development of training

Spring/Summer 2025

- Bridges are available to Master Loggers with training

Wisconsin Temporary Bridge Program

Federally Funded Temporary Bridge Program

As of December 21, 2022, the following were the only states which applied for funding;

The states that applied were AL, IN, ME, MD/DE, MA, MI, NC, OH, SC, SD, TX and WI



Current WDNR Program for State Properties

Wisconsin Department of Natural Resources (WDNR) has an active temporary bridge program for loggers with timber mats and pole fords available at several of our state properties. We will be expanding this program by adding longer and heavier duty bridges to be utilized on public lands, with a priority for state forests and other DNR properties. This program will continue to be administered as it has been historically – a no-cost rental program for loggers.

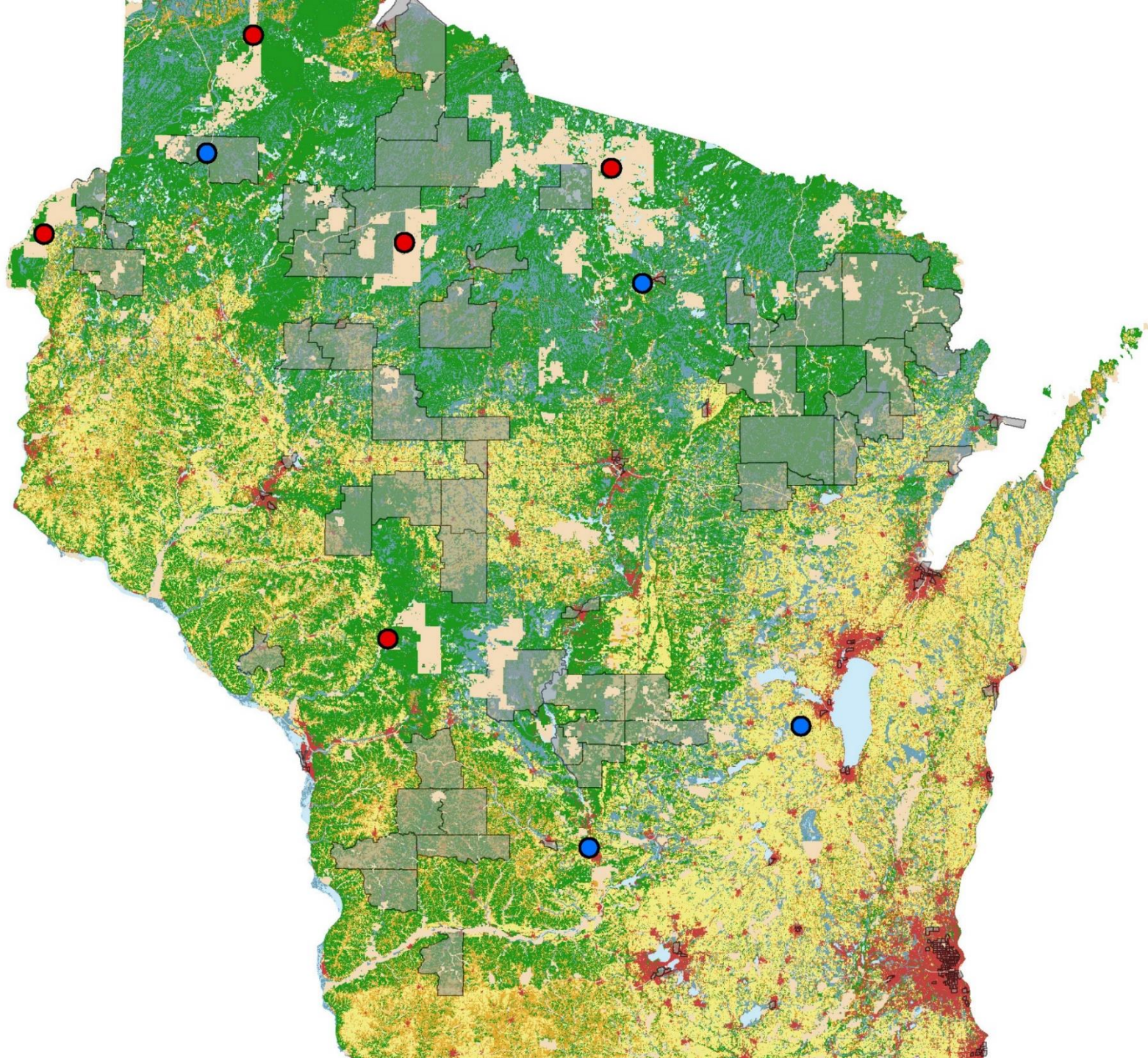


Program Expansion

WDNR will be partnering with the Great Lakes Timber Professionals Association (GLTPA) and the Forest Industry Safety and Training Alliance (FISTA) to develop a new complementary temporary bridge program for loggers on private lands.

No rental rate will be charged for the bridges used on either program.

- Bridge storage/pickup sites have been identified for both the state forest and private land programs.
- For the state forest program, the bridges will be stored at the same locations as where the current timber mats are kept. Those location and expected bridges for those locations are:
 - At Flambeau River State Forest: one 30ft trucking bridge, and eight of the 24ft mats.
 - At Brule River State Forest: three of the 24ft mats
 - At Black River State Forest: three of the 24ft mats
 - At Governor Knowles State Forest: six of the 24ft mats.
 - At Northern Highlands American Legion State Forest: one 30ft trucking bridge and eight of the 24ft mats.
- For the private land program, four locations: Rhinelander, Minong, Oshkosh, and Baraboo will each receive twenty of the 8" thick 18ft mats, and four each of the 1-foot-thick mats, 18ft and 24ft long.



Bridge Locations

- Private
- State Forest

- DNR Properties
- Underserved Communities
- Urban/Developed
- Agriculture
- Grassland
- Forest
- Open Water
- Wetland
- Barren

Tracking and Damage

- Users of the bridges will not be responsible for normal wear and tear maintenance costs. For the state forest program, any damage resulting in negligence on behalf of a contractor or logger can come out of a timber sale performance bond or may be billed directly for the replacement cost.
- For the state forest program, the bridges will be inventoried by the state property manager or supervisor using timber sale file folders and excel spreadsheets, which will be shared with the DNR Forest Hydrologist. For the private lands program, the timber mat bridges will also get inventoried by GLTPA and FISTA staff into an excel spreadsheet and shared with the DNR Forest Hydrologist.

Cost and Size

State Properties include:

28 large timber mats 4' x 12" x 24' for 1458.00 each. \$40,824 total

Total for State properties is \$40,824.00

Private Properties Include:

80 small timber mats 4' x 8" x 18' for 559.70 each. \$44,776 total

16 medium timber mats 4' x 12" x 18' for 1029 each. \$16,464 total

16 large timber mats 4' x 12" x 24' for 1458 each. \$total \$23,328 total

Total for private properties is \$84,568

Total supplies for both properties is \$125,392.00

Cost for these mats includes shipping to the end destination.

Total Direct charges \$167,892.00 for the Grant Application

Conclusion and Questions

Henry Schienebeck (GLTPA): 715-661-1130, henry@gltpa.org

Paul Irving (SRI): 906-399-2626, paul@renewableresourcesolutions.com

Survey



<https://www.surveymonkey.com/r/VKFHQYR>



Great Lakes
**Timber
Professionals**
Association



Florence Sustainable Forestry
Conference
Wednesday, April 17, 2024



On a National Level, GLTPA coordinates with:

- **American Loggers Council (ALC)**
- **American Forest & Paper Association (AF & PA)**
- **Commercial Vehicle Safety Association (CVSA)**
- **Forest Resource Association (FRA)**
- **Federal Forest Resource Coalition (FFRC)**
- **Federal Timber Purchasers (FTP)**
- **Evergreen Forest County Group**

United States Capitol

Washington DC



Northern Long Eared & Tri-Colored Bats

- U.S. Fish & Wildlife Service Listed NLEB as Endangered March 31, 2023, and proposed listing for the Tri-Colored September 13, 2022
- Interim Guidance was also issued March 31 and was scheduled to remain in place until April 1, 2024. On April 1, 2024, USFWS extended the interim guidance.
- April 1, 2024, A preview of the draft guidance was sent to stakeholders for review and comment with the hope of having final guidance done by the summer of 2024. The guidance includes conservation measures for the Tri-Colored Bat should it be listed.
- Please contact us at bat_tools@fws.gov to share any questions and substantive feedback.



European Union Deforestation Regulation (EUDR) What Does It Mean?

- From AF & PA **“The U.S. pulp and paper industry is not linked to global deforestation and forest degradation.** As such, the EU Deforestation Regulation (EUDR) – in its current form – **poses significant concerns for our country.**
- The rule presents severe compliance challenges, would disrupt sustainable supply chains, and imposes unwarranted and costly requirements for doing business with the E.U.
- We commend U.S. Senators Marsha Blackburn (TN) and Angus King (ME) for leading this bipartisan effort with 24 other Senators to address the challenges of EUDR. **It's vital the USTR pursue clarity on this regulation's requirements related to traceability, data reporting and country benchmarking.** This partnership is essential to protect the interests of our industry, our workers, and the American economy.



National Forest Road Hearing

- ▶ House Natural Resources Sub-Committee on Federal Lands Chair-Congressman Tom Tiffany
- ▶ Hearing May 13,th 2024 in Hayward Wisconsin.
- ▶ Regarding Use of National Forest Roads closed after forest management is completed.
- ▶ Should Roads remain Open for Public Use



Old Growth and Mature Forests

- Biden Administration issued Executive Order 14072 in April 2022, to define and effectively create special considerations for “old growth” and “mature forests” on federal lands, apparently striving to elevate a particular stage of forest succession above other, legally required multiple use purposes.
- To date there has been no single, coherent definition for “old growth” or “mature forests” however, the administration did proceed with a report which published that wildfire, insects, and diseases are the leading threats to “mature and old growth” forests. The report also noted “tree cutting” is a relatively minor threat” and “in general, management improved or maintained these stands.”



American Loggers Council

- Recent Article; “The Dismantling of the American Timber Industry”
- Highlights; In the past 15 months over 50 mills have been closed or taken other action to reduce production resulting in the loss of 10,000 or more jobs.
- According to the World Bank, the U.S. is now the leading global importer of softwood lumber from New Zealand and imports over \$40 billion in wood products from Canada, China, and Brazil.
- Over regulation, harvest restrictions, unfair trade practices, incessant litigation, and a failure to recognize the opportunity of forest-based feedstock to produce renewable energy.



Wisconsin State Organizations GLTPA Coordinates with:

- **Federal Sustainable Forestry Committee (FSFC)**
- **Trees for Tomorrow (TFT)**
- **WI Council on Forestry (COF)**
- **WI County Forest Association (WCFA)**
- **WI Towns Association (WTA)**
- **WI Oversize/Overweight Committee (OSOW)**
- **WI Freight Advisory Committee (WFAC)**
- **WI Transportation Stakeholders Taskforce (WTST)**
- **Local Road Improvement Discretionary Fund (LRIP)**
- **Multimodal Local Supplement Committee**
- **WI Wood Marketing Team (WWMT)**
- **WI Paper Council (WPC)**
- **Wood Industry Collaborative**





Agriculture Road Improvement Program ARIP

- Governor Evers Signed into Law July of 2023
- \$150 Million Applies to Local Roads Supporting AG and Forestry
- Provides for 90% State 10% Local match for Funding
- Industry Must Provide Supporting Documentation to Show Need
- Roads Must be Upgraded too All-Season Condition and May No Longer be Posted for Weight.
- First Round of Applications for \$50 Million was Due April 5th,2024
- The Second Round of Applications for \$100 Million Dollars Will Be Solicited Sometime in June or July.



Attracting New Markets

- ▶ New Markets are Bypassing the Great Lakes Region. Why?
- ▶ The Wisconsin Council on Forestry is perusing an approach to address where hangups are to attract new wood consumers.
- ▶ Two issues identified are the length of time to get permits and a growing concern regarding forested land being deforested for other purposes which may lead to fiber availability issues. How much is and will be converted and how much conversion can be tolerated before it impacts sustainable forest management.



WI Senate Bill 399

- More Debate to Come
- From Senator Felzkowski, “Senate Bill 999 was written as a viable solution to expand recreational access for motorized vehicles, providing new opportunities for hunters, anglers, and recreational vehicle enthusiasts.”
- The only other alternative to expand recreational vehicle use from the Senators perspective, is utilization of the Knowles-Nelson Stewardship Fund to purchase more public land spending millions of taxpayer dollars placing more land in government control, which removes it from county and municipal tax rolls in perpetuity.



Michigan State Organizations GLTPA Coordinates with:

- **County Road Association of MI (CRA)**
- **Upper Peninsula Sportsmen's Alliance (UPSA)**
- **MI Farm Bureau (MFB)**
- **MI Dept of Technology, Management & Budget (DTMB)**
- **Eastern Upper Peninsula Transit Authority (EUPTA)**
- **MI Townships Association (MTA)**
- **MI Association of Timbermen (MAT)**
- **MI Forest Products Council (MFPC)**
- **MI Assoc. of Timbermen Self Insured Fund (MATSIF)**
- **MI Operating Engineers (MOE)**
- **Sustainable Resource Institute (SRI)**
- **Associated General Contractors of America (AGC)**





Extending the Michigan/Wisconsin IFTA Agreement

- Original Agreement is for 30 Air Miles
- Soon After it Went Into Effect it Was Discovered That it DID NOT Cover Deliveries to Billerud Escanaba as Originally Intended.
- February 20th, 2024, A House Transportation Hearing was Held to Extend the Agreement to 50 Miles. HB 5378-5379
- Passed Out of Committee Unanimously.
- Expected to Pass When the House Reconvenes After Easter Recess and Spring Break



MI PSC Temporarily Extends Life for Cadillac and Lincoln Biomass Consumers

- MI PSC rejected a request from Consumers Energy seeking to early termination with the Cadillac and Lincoln biomass plants.
- PSC basically stated that solar, storage and market prices could not meet the reliability needed to provide customers with affordable, dependable energy.
- Closure of these consumers would be detrimental to the continued recovery of Kirtland's Warbler as material harvested to maintain their habitat was consumed by these facilities. Additionally, several logging companies would be negatively impacted as well as the MDNR Forestry Budget.



Category “E” Road Funding

- Critical Roads for Economic Development Act passed into law in 1987 containing \$5 million slated for use by County Road Commissions using a formula based on having 34% or more commercial forest land within their boundaries. The fund includes counties having national lakeshore and national parks as well.
- The fund has never been adjusted for inflation. Had this been done the current amount should be closer to \$15 million.
- Seasonal Roads are critical for forestry as is the funding to maintain them. GLTPA is researching funding alternatives which do not involve PA 51.



Education, Education, Education

- ALC Develops a Four Segment Video Series Promoting Loggers and the Benefits of Logging.
- ALC Annual Washington DC Fly-Inn April 17th, 18th, and 19th, 2024
- Let the Sawdust Fly with Peter Wood aired the last Wednesday of Every Month.
- Beleaf it Or Not with Bill Cook and Georgia Peterson is a fun filled educational series of programs in existence for several years.
- All podcasts can be found at gltpa.org under the “Resources” tab, then click on media.




More Education

- ▶ Log A Load for Kids events are a great beginning to start generating interest in forest management and career opportunities.
- ▶ From there the St. John Education Fund has been instrumental in providing bus funding to give children the opportunity to attend Trees For Tomorrow. Funded; Shawano 144 students, Craig Montessori, Mil. 44 students, Rogers Street Academy, Mil. 35 students, Tamarack Waldorf, Mil., 24 students and more on the way.
- ▶ Discover Media Works Discover Wisconsin non-branded episode in development for debut at the 2024 EXPO in Green Bay.



EXPO Education, Exposure to Forestry Professionals

- GLTPA provides high school students with an opportunity to attend the EXPO at no cost to speak with and learn from forestry professionals about careers and opportunities at no cost.



*"Do not go where the path may lead, go
instead where there is no path and leave
a trail."*

RALPH WALDO EMERSON

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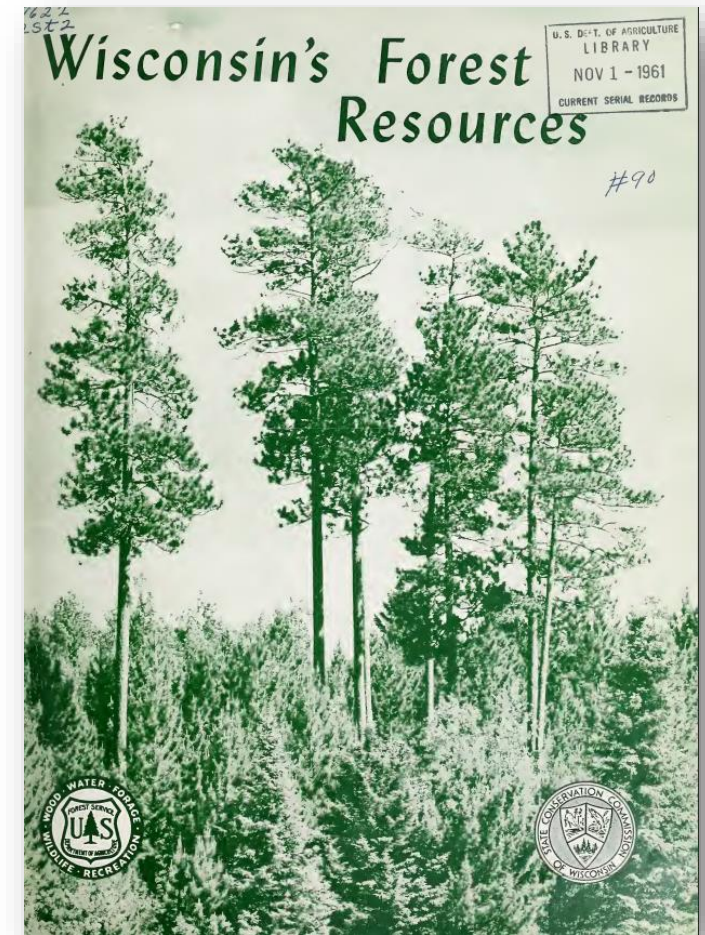
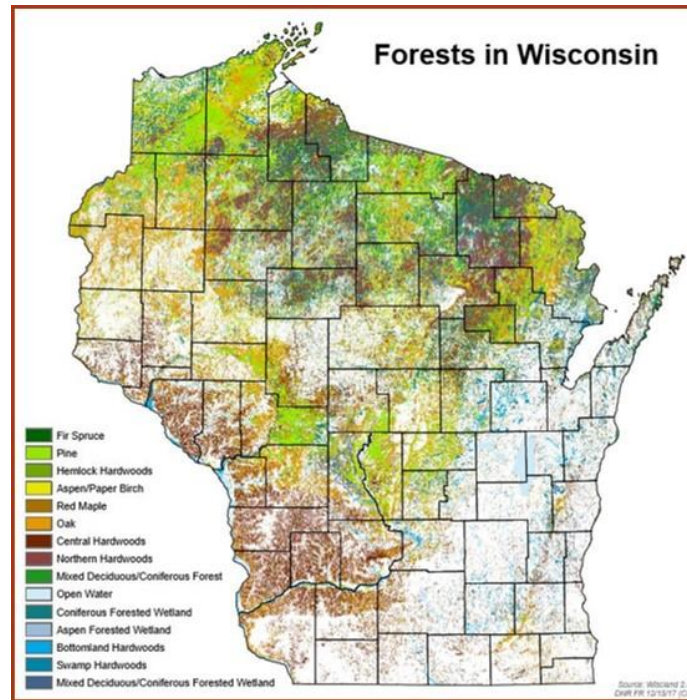


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Measuring Wisconsin's Forest Resources



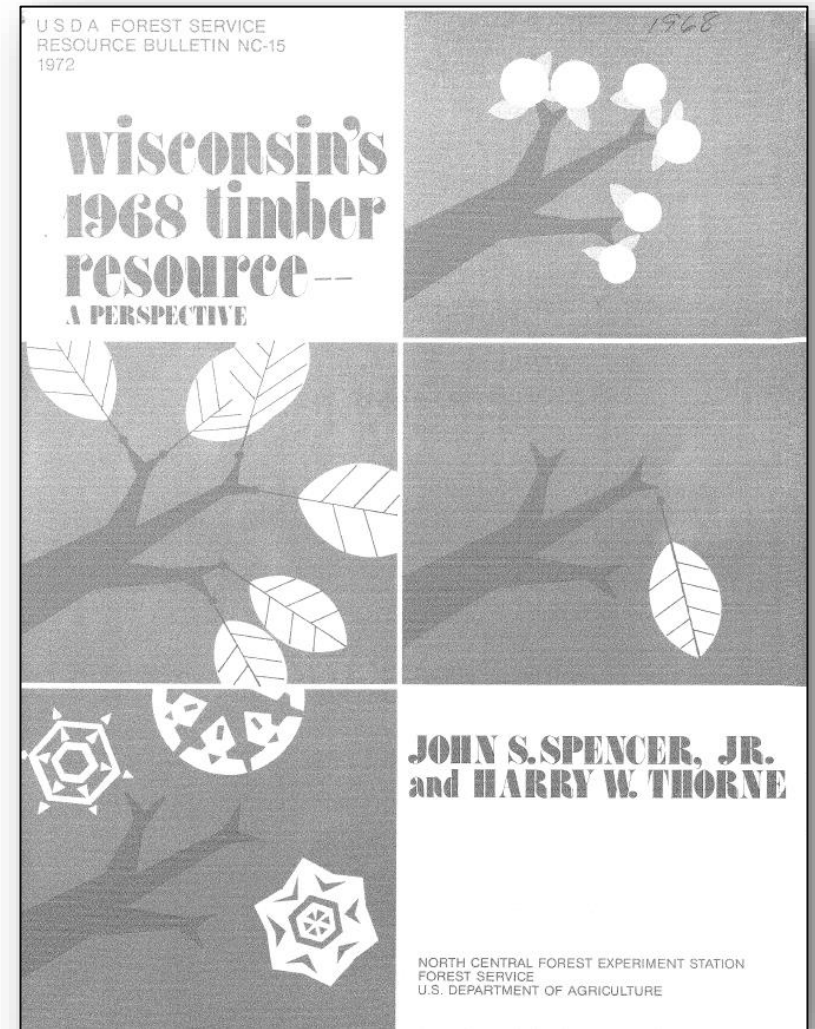
Sustainable Forestry Conference

Florence, WI April 2024

Ryan Heiderman, Forest Inventory Analyst

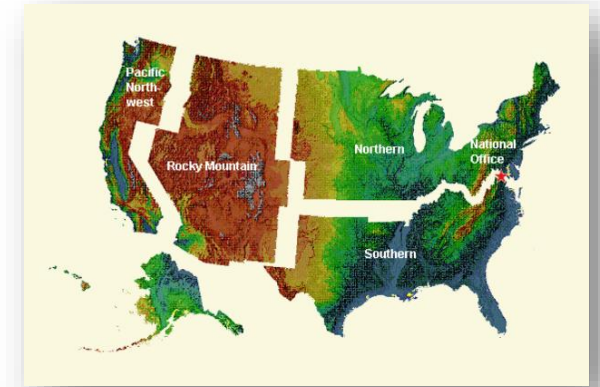
Forest Inventory & Analysis (FIA) History

- 1897 – The Organic Administration Act
 - Established national forests, included provisions for inventory of these lands
- 1928 – McSweeney-McNary Forest Research Act
 - Created a national “Forest Survey”
 - Ordered periodic inventories of federal, state and private forest lands
 - By 1962, all 48 conterminous States had at least one periodic inventory
 - Wisconsin: 1936, 1956, 1968, 1983, 1996, 2000-2021



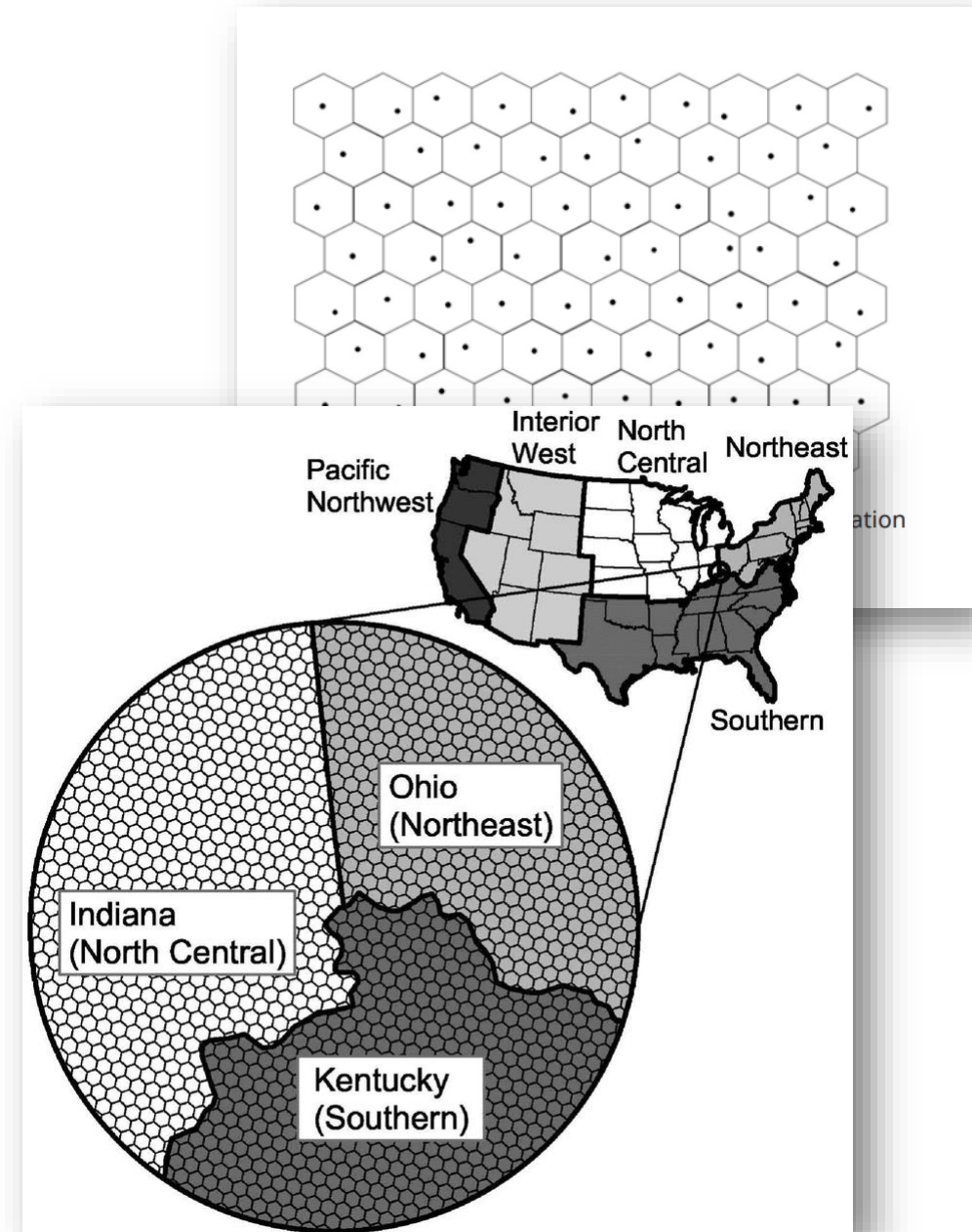
FIA History cont.

- 1974 – Forest and Rangeland Renewable Resources Planning Act
 - Broadened scope of the inventory to include soils, wildlife habitat, grazing lands
 - Mandated inventory updates every 10 years
- 1978 – Forest and Rangeland Renewable Resources Research Act
 - Replaced the McSweeney-McNary Forest Research Act
- 1988 – Forest Ecosystems and Atmospheric Pollution Research Act
 - Founded the Forest Health Monitoring (FHM) Program
 - Beginning of the eventual switch to annual inventories
- 1998 – Research, Extension and Education Reform Act (Farm Bill)
 - Switch the **annual** inventories for each state
 - Mandated 5-year reporting
 - Core variables and national standards established
 - Consolidation of FHM and FIA
- 2014 – Agricultural Act (Farm Bill)
 - Urban FIA established
 - New focus on biomass and carbon
- 2018 – Agriculture Improvement Act (Farm Bill)
 - Continued funding and reporting mandate
 - New emphasis on remote sensing
- 2023 – Farm Bill (in progress...)
 - Explicit incorporation for forest carbon data collection and analysis into FIA mandate



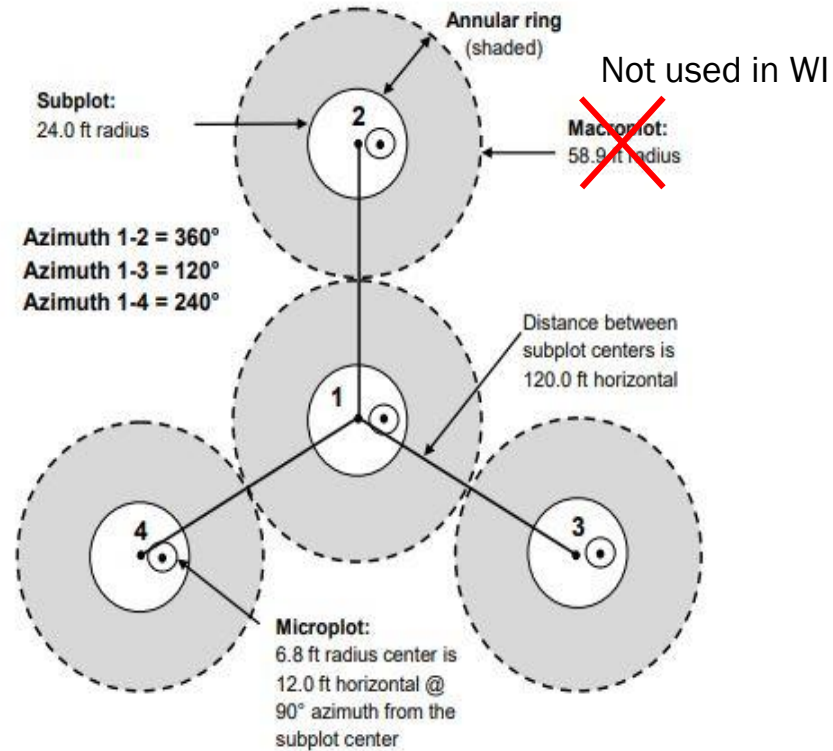
FIA Sample Design

- Post-Stratified Sample Design
- Phase 1 – Aerial photography and remote sensing
 - Hexagonal layout of plots across the landscape
 - Does plot fall on forested land?
 - Estimation units (based on region, ownership, canopy cover, etc.)
- Phase 2 – Traditional ground plots (P2 plots)
 - Visit the forested plot
 - “Core” variables, collect forest/tree information
- Phase 3 – Focus on forest health
 - 1/16th of P2 plots (P2+ plots)
 - Regional differences



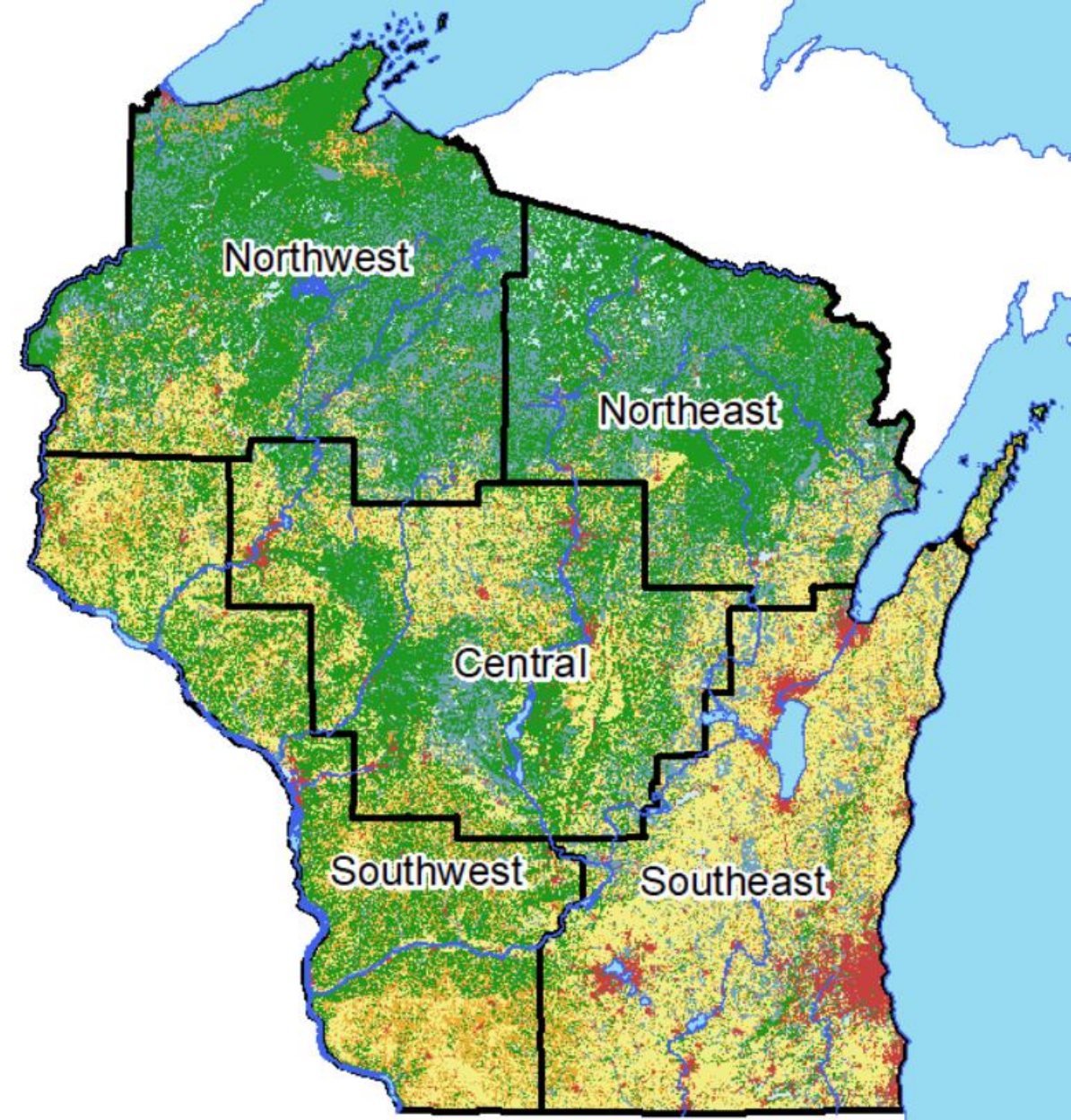
FIA: Forest Inventory and Analysis

- National-scale forest inventory
- Congressionally mandated program
- USFS administered, input/customization by states/regions
- Network of permanent, field measured plots across all forested land in the U.S.



FIA in Wisconsin

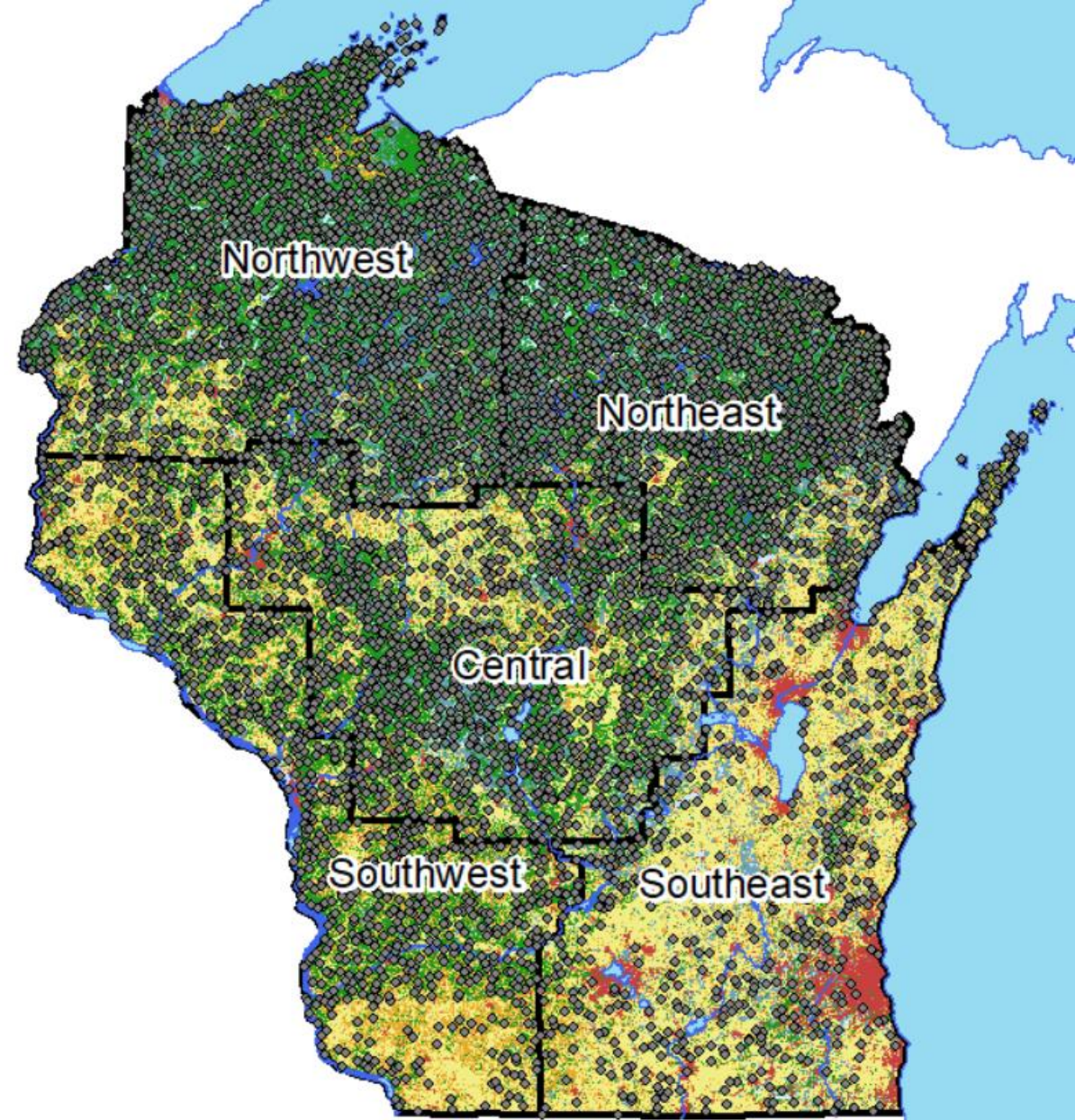
- Forest land only:
 - at least 10 percent canopy cover of trees (or capable of)
 - at least 1 acre in size and 120 feet wide
- Currently on 7-year cycle
- Double intensity
- 6,336 plots in 'accessible forest conditions'
- Field work: Half USFS/Half Contractor



WISCLAND2.0

FIA in Wisconsin

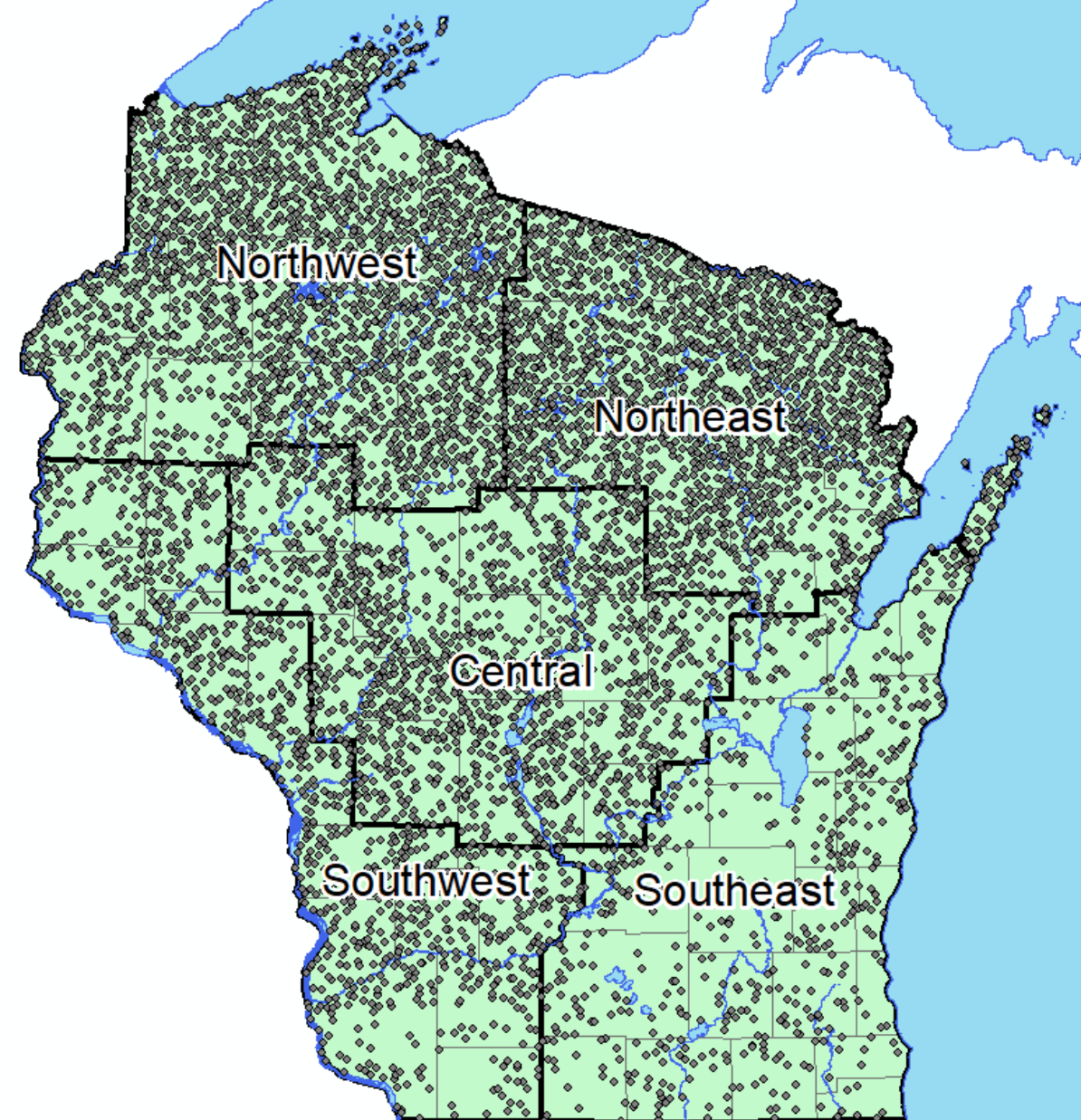
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Forested Plots: Fuzzed locations

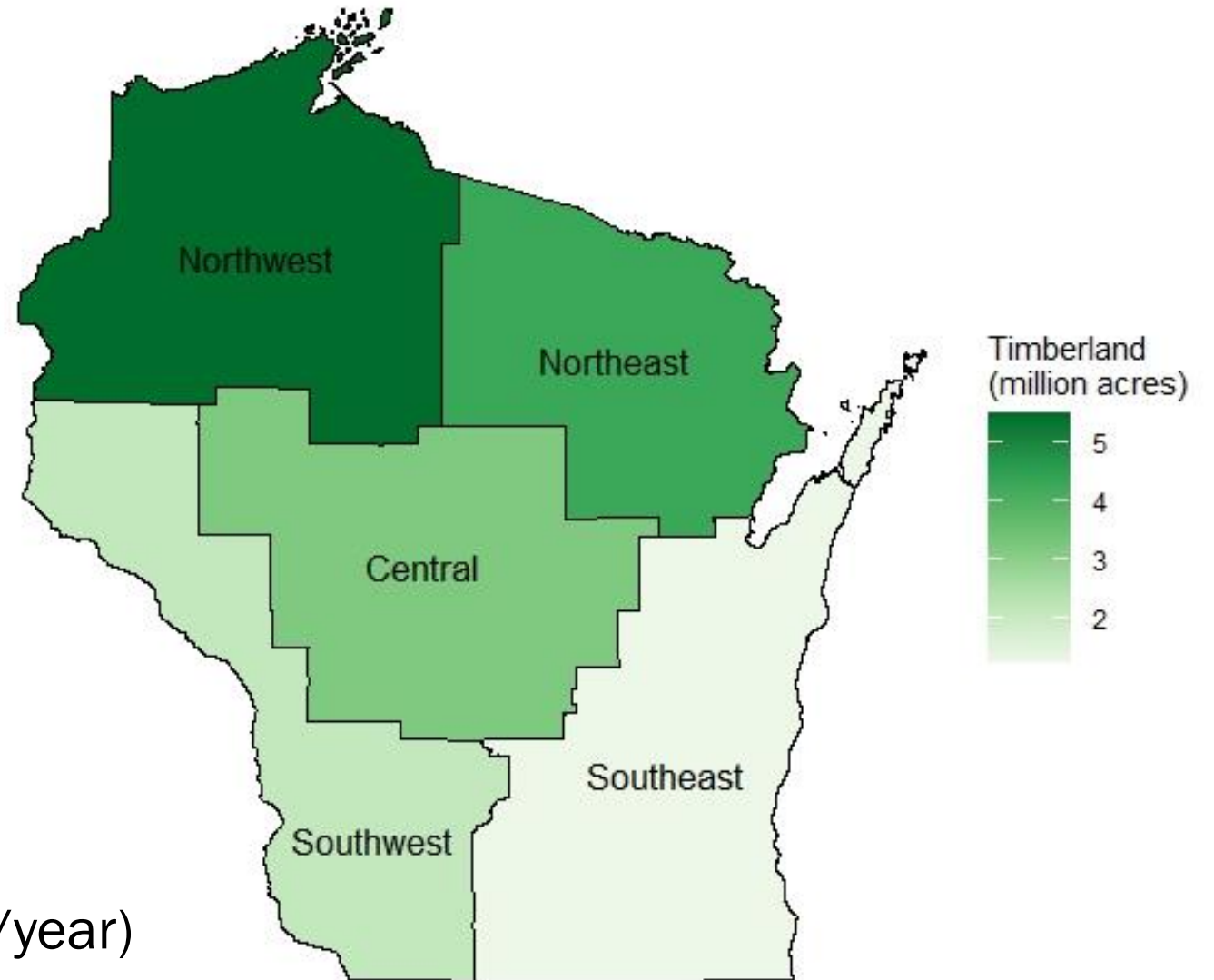
FIA in Wisconsin

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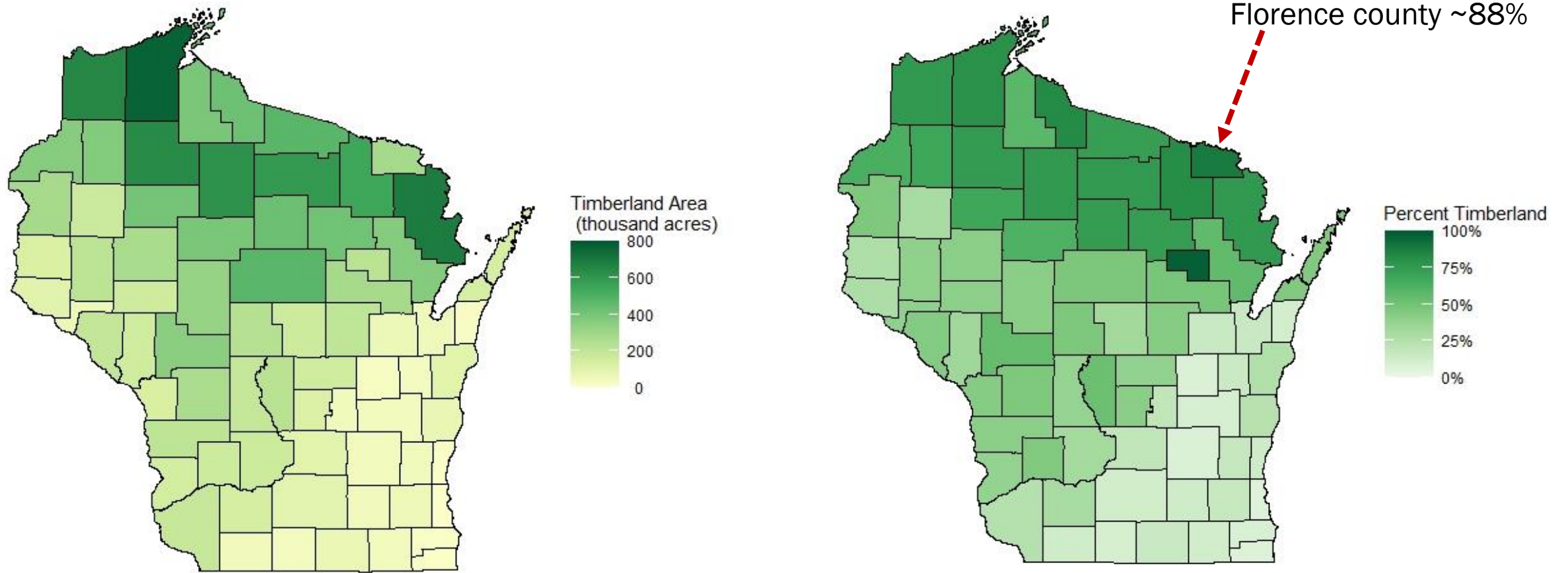
Forested Plots: Fuzzed locations

Timberland



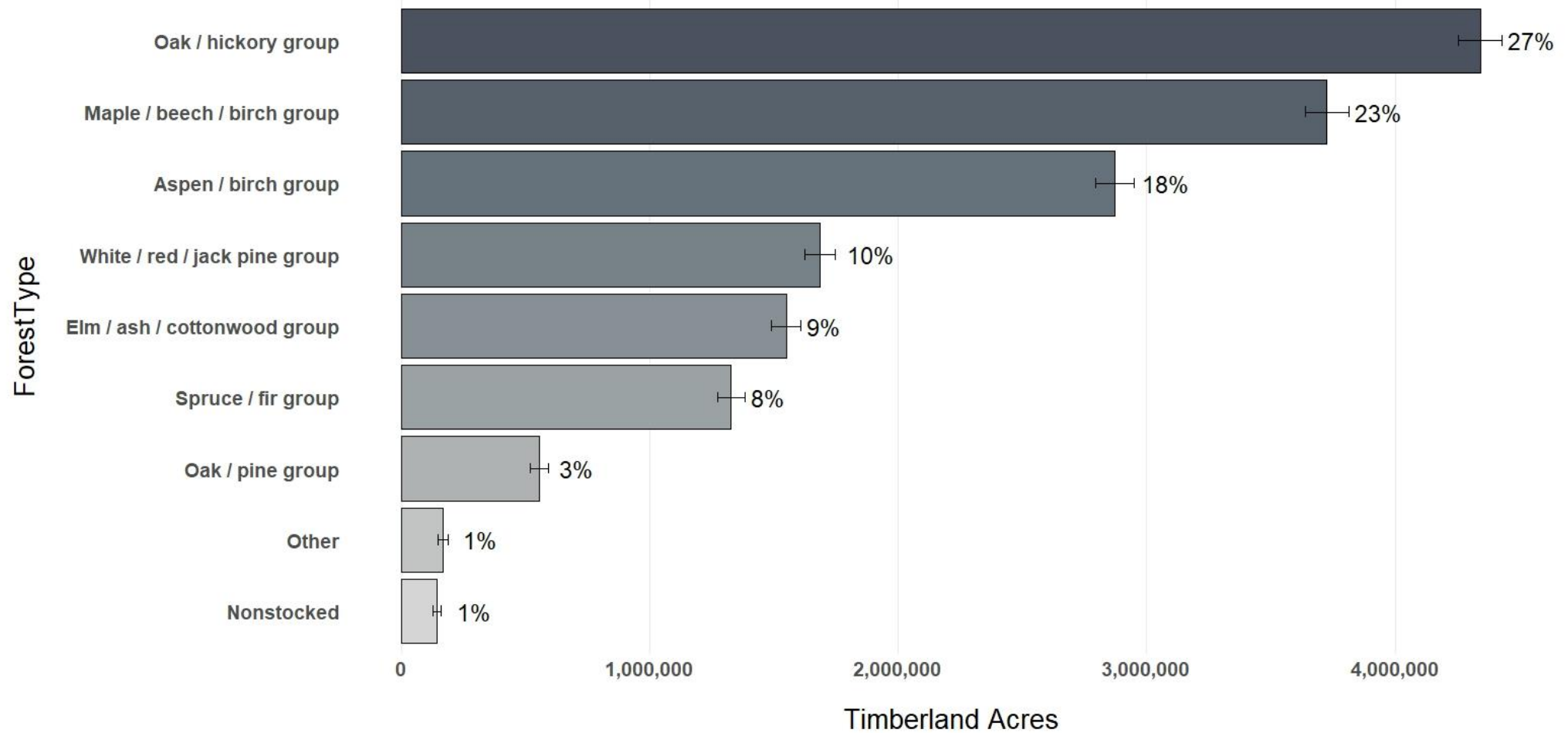
- Non-reserved
- Productive forestland (>20 CuFt/acre/year)
- 45% of the state is timberland
- State total = 16.4 million acres (16.9 mil forestland)

Timberland: Quick County Look

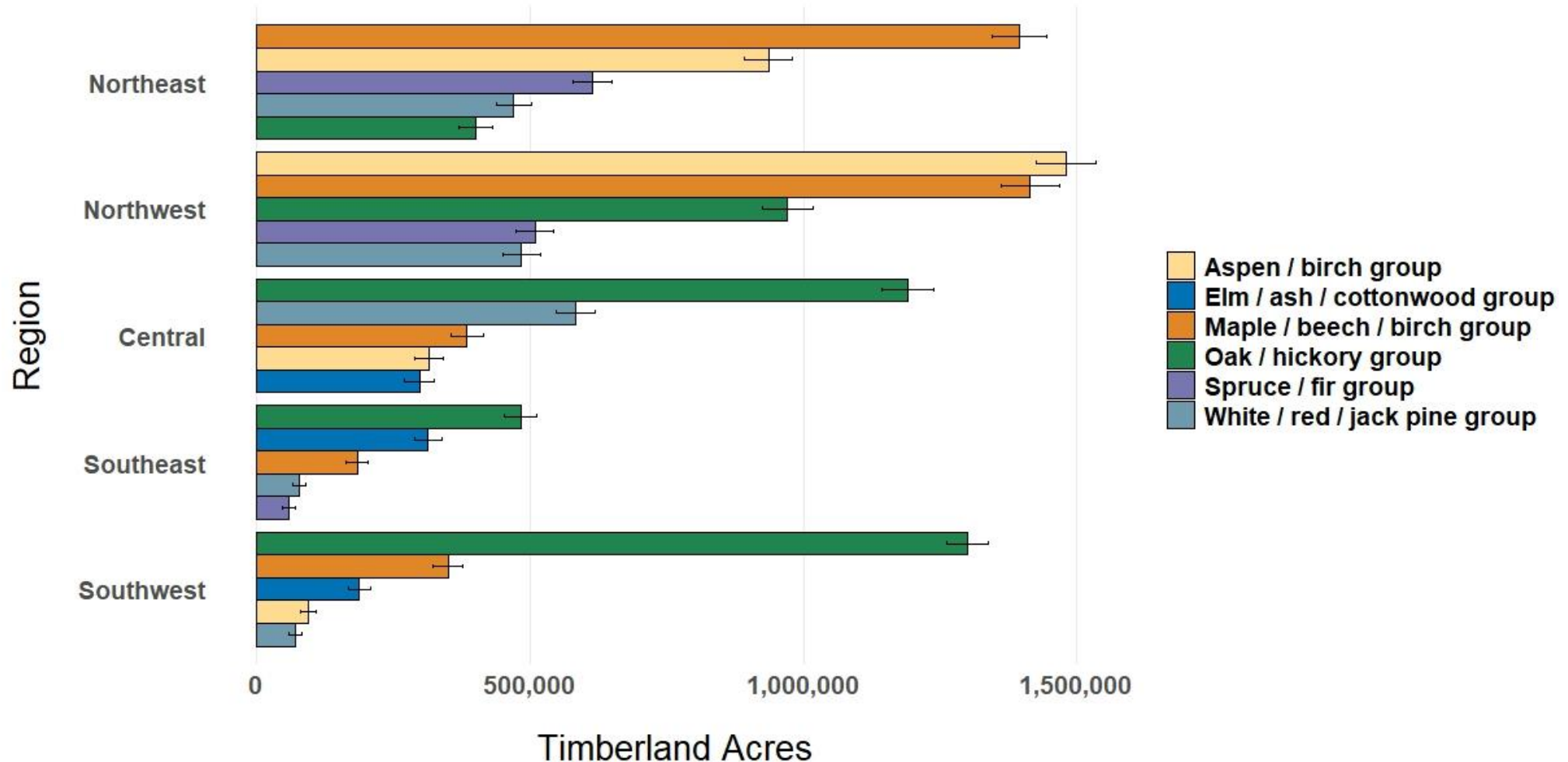


Menominee, Florence, Iron, Forest, Bayfield are ~80%+ forested

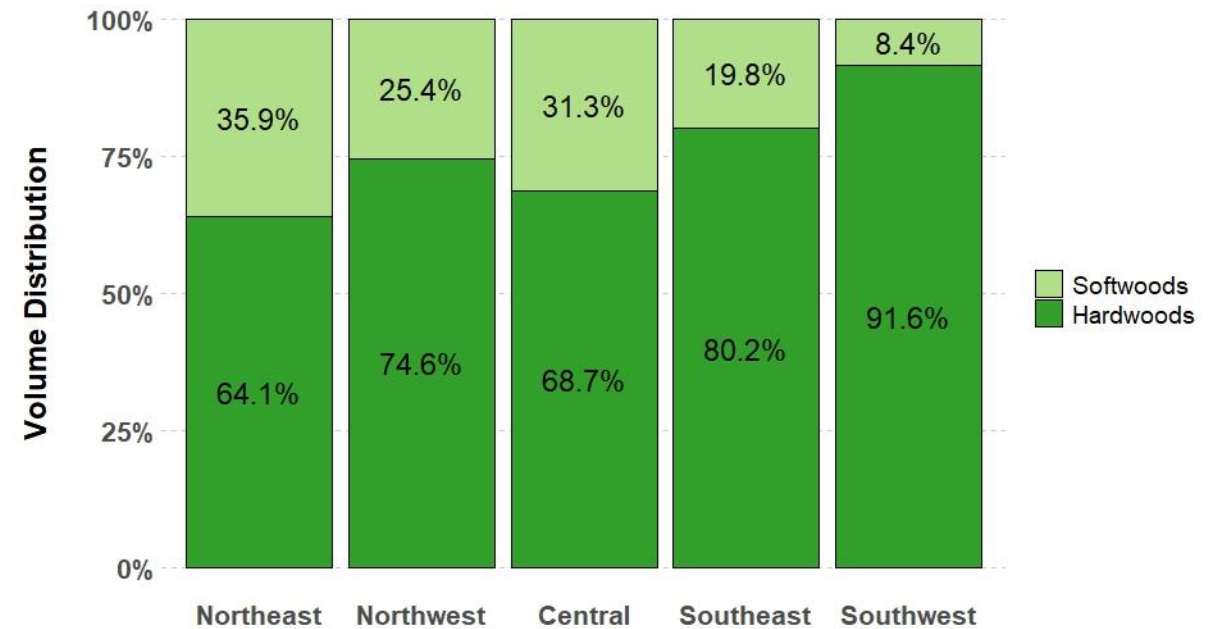
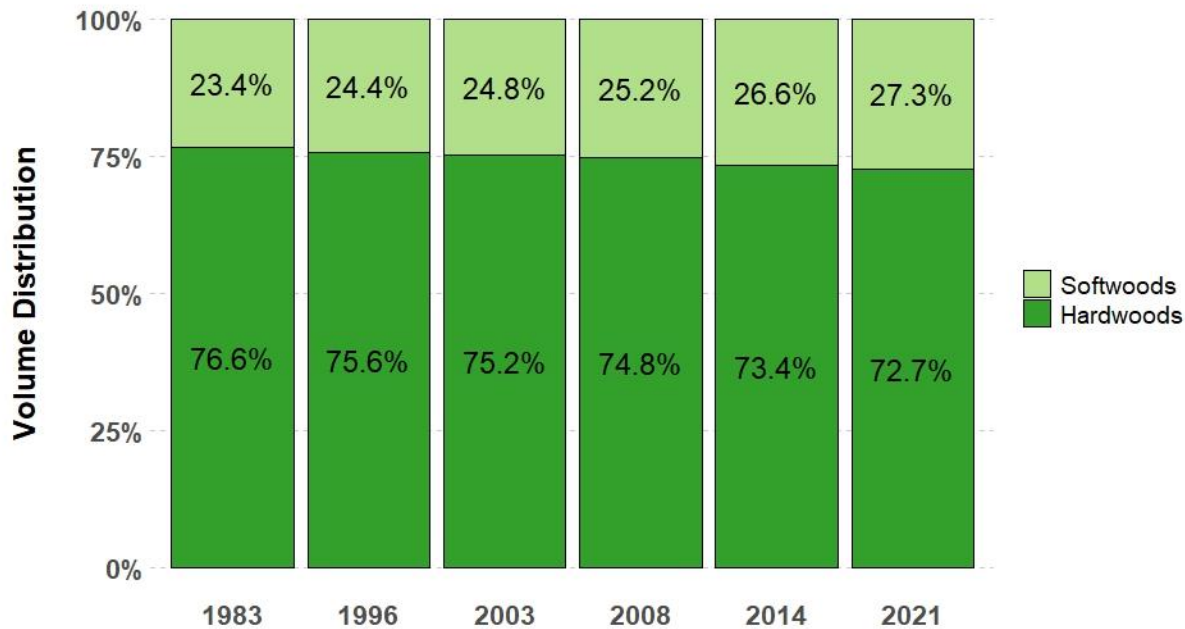
Forest Types of Wisconsin



Top Forest Types by Region



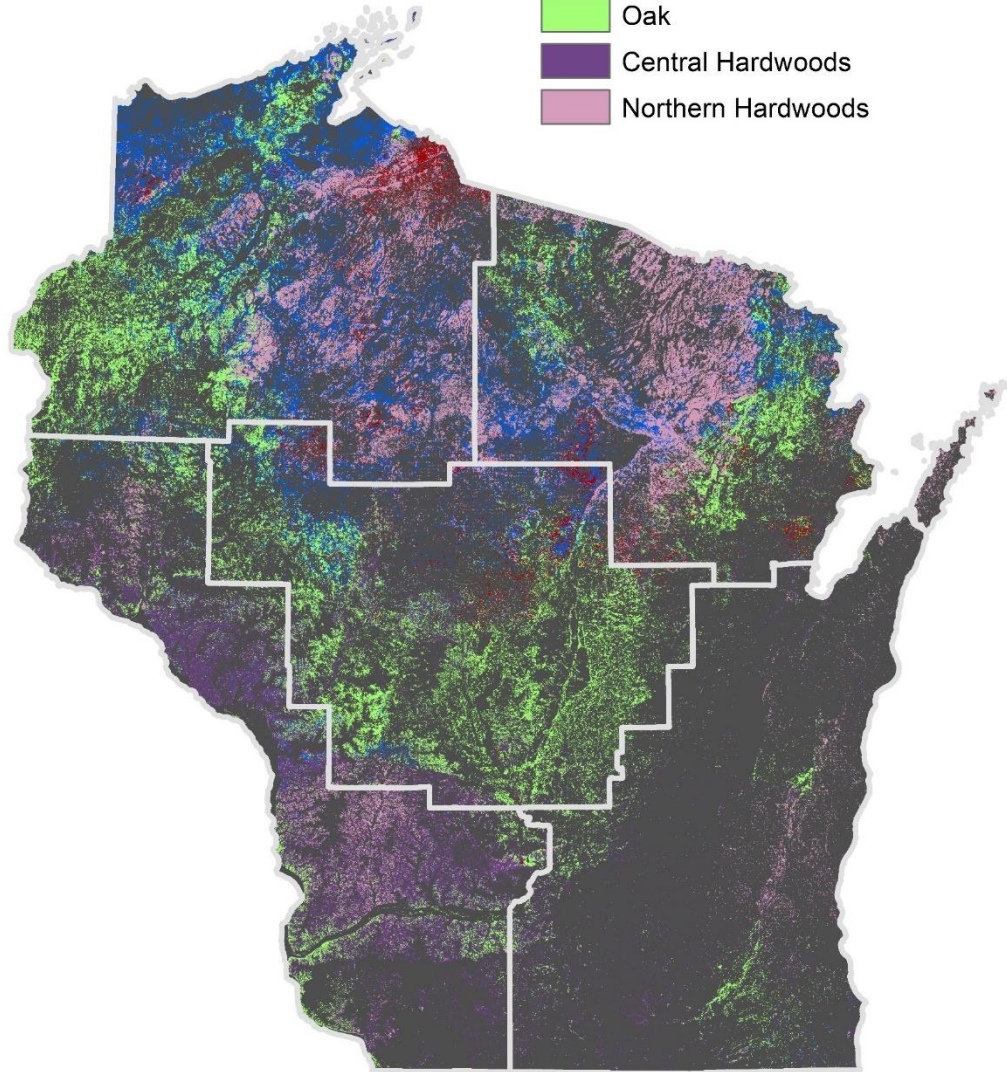
Hardwood Dominated Landscape



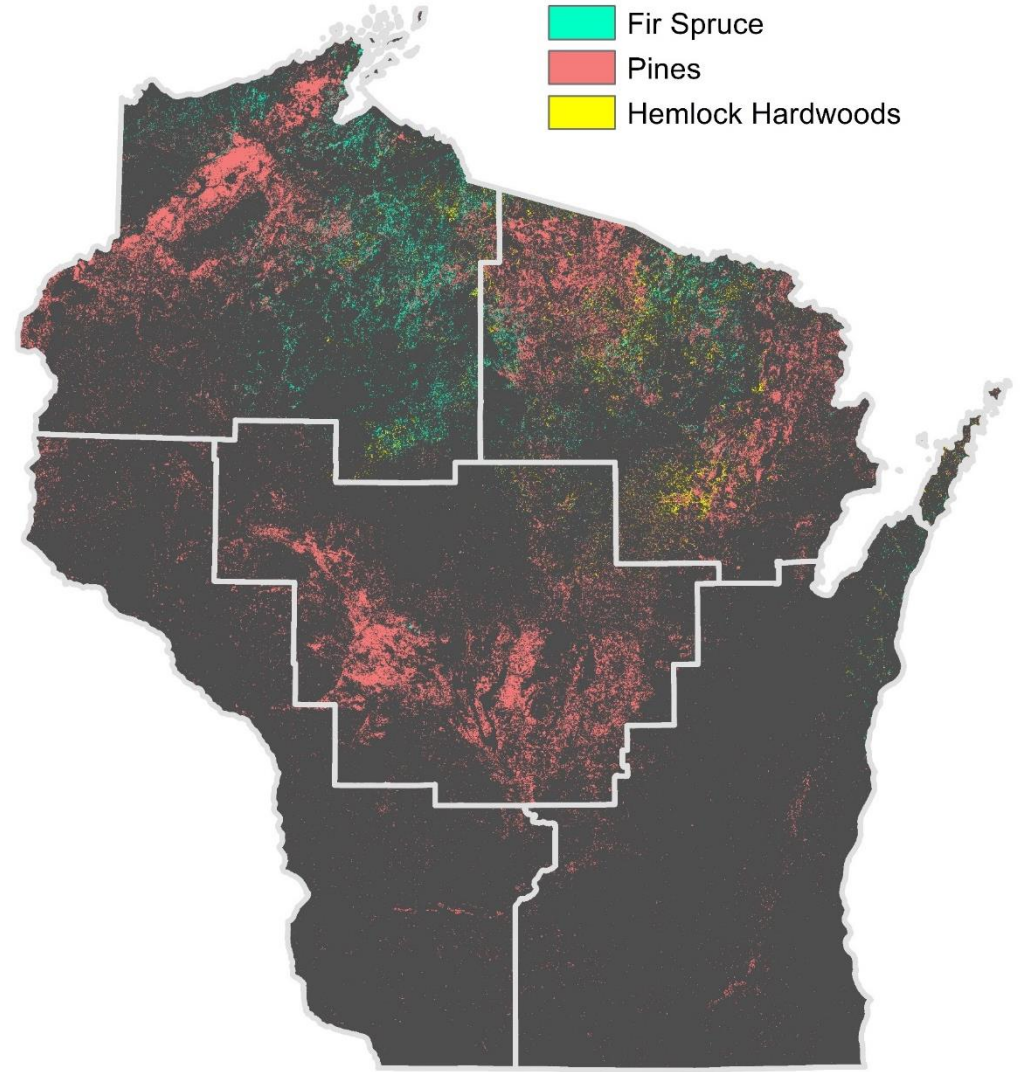
Spruce, fir and hemlock in NE, NW

Pine in Central, NE, NW

- Not Broad-leaved Deciduous Forest
- Aspen / Paper Birch
- Upland Red Maple
- Oak
- Central Hardwoods
- Northern Hardwoods



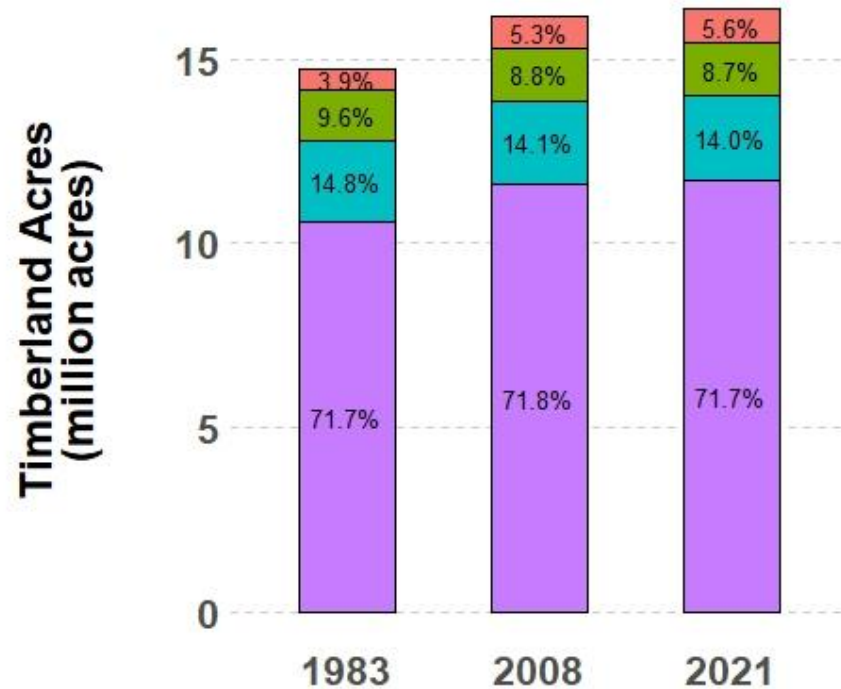
- Not Conifer Forest
- Fir Spruce
- Pines
- Hemlock Hardwoods



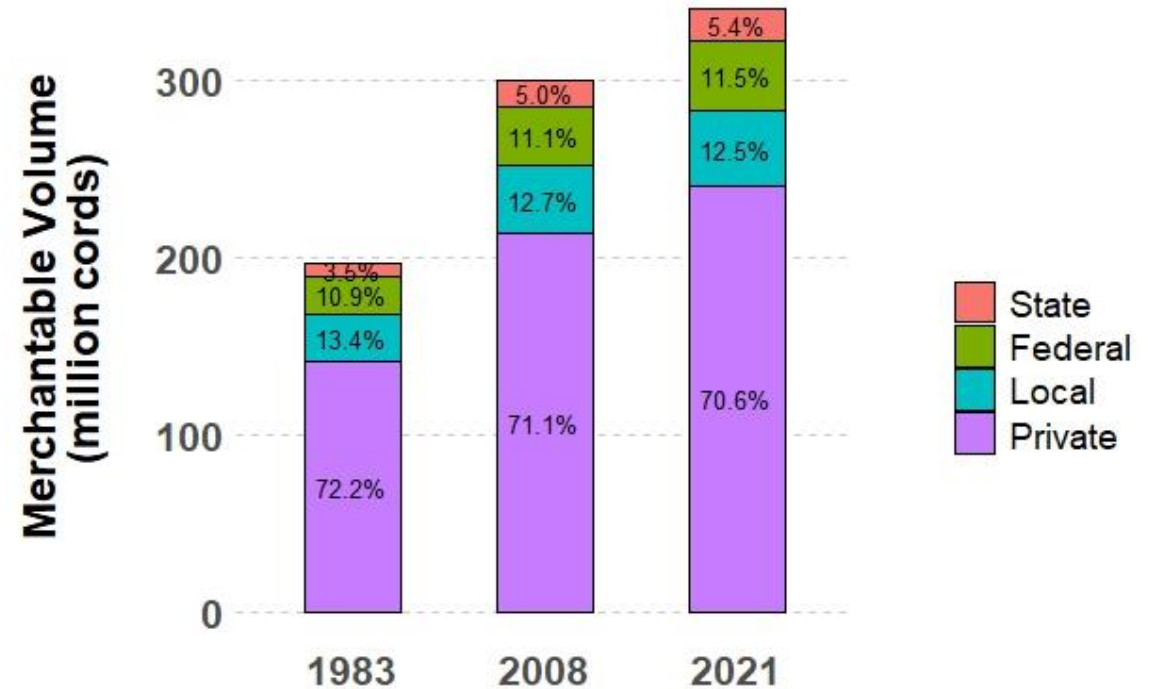
Wiscland 2.0

Timberland Ownership

A

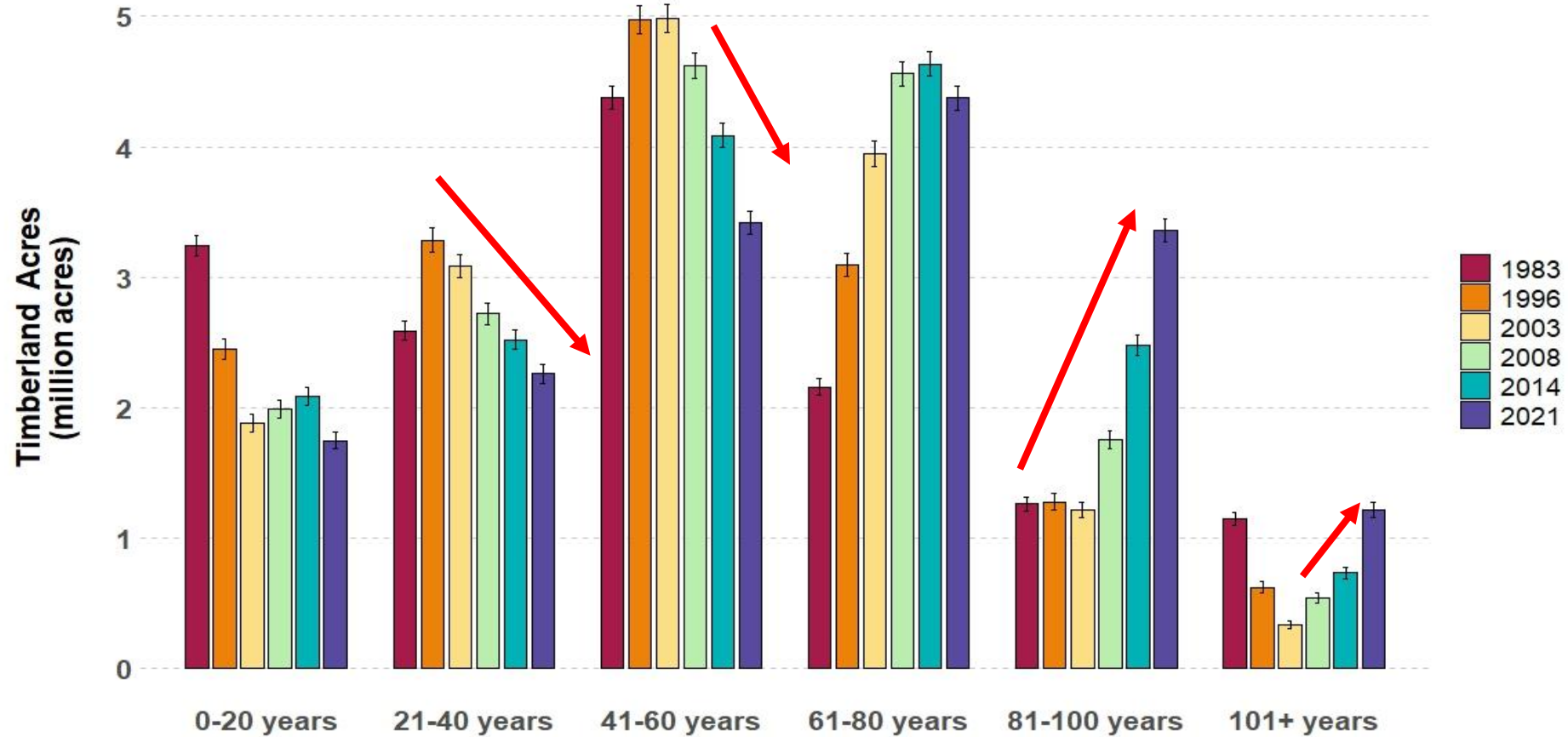


B

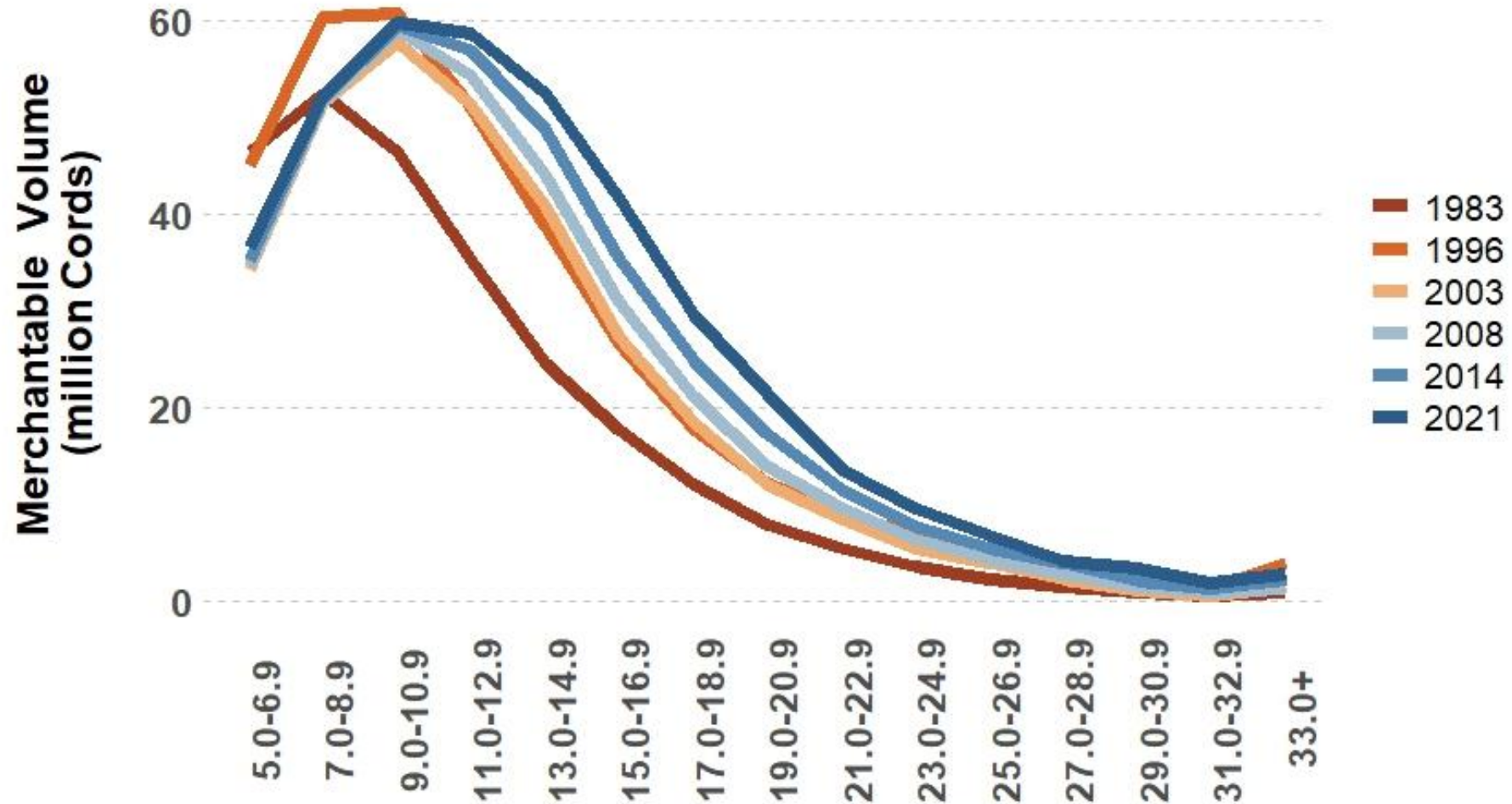


Ownership (A) timberland acres; (B) merchantable volume
Source: USDA Forest Inventory and Analysis data. Wisconsin, 2021

Wisconsin's forests are aging

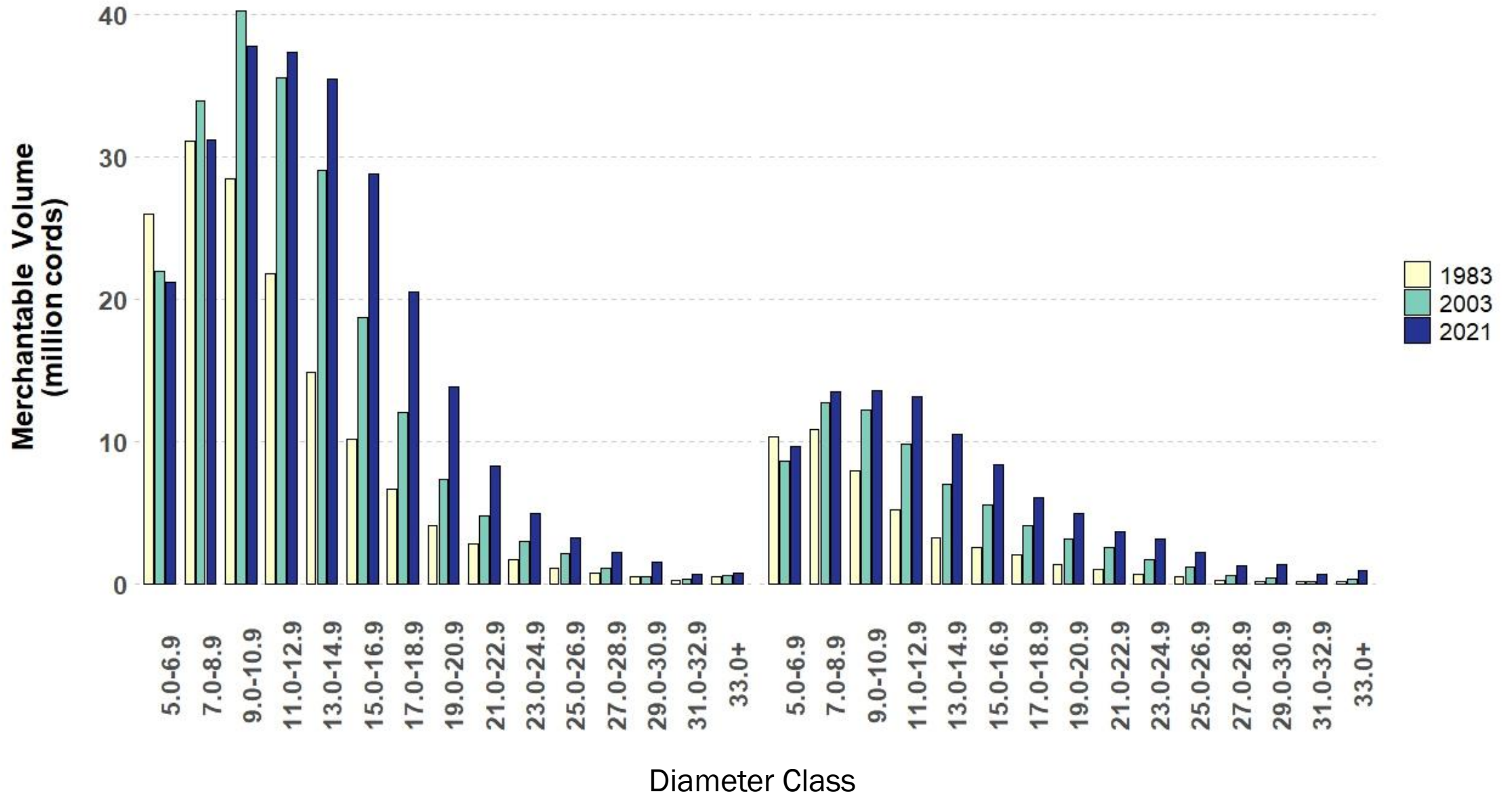


Volume moving to larger diameter classes

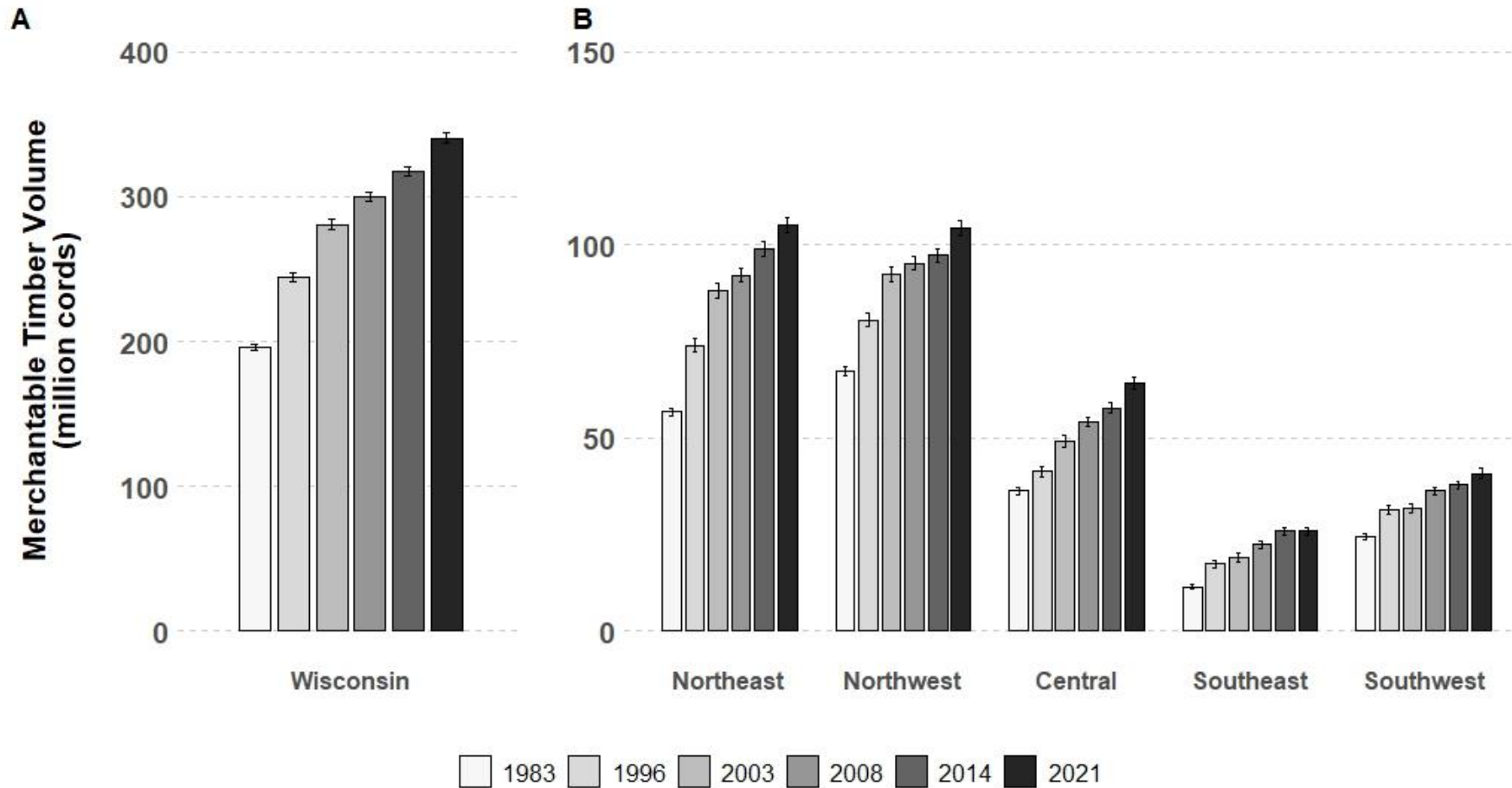


Hardwoods

Softwoods

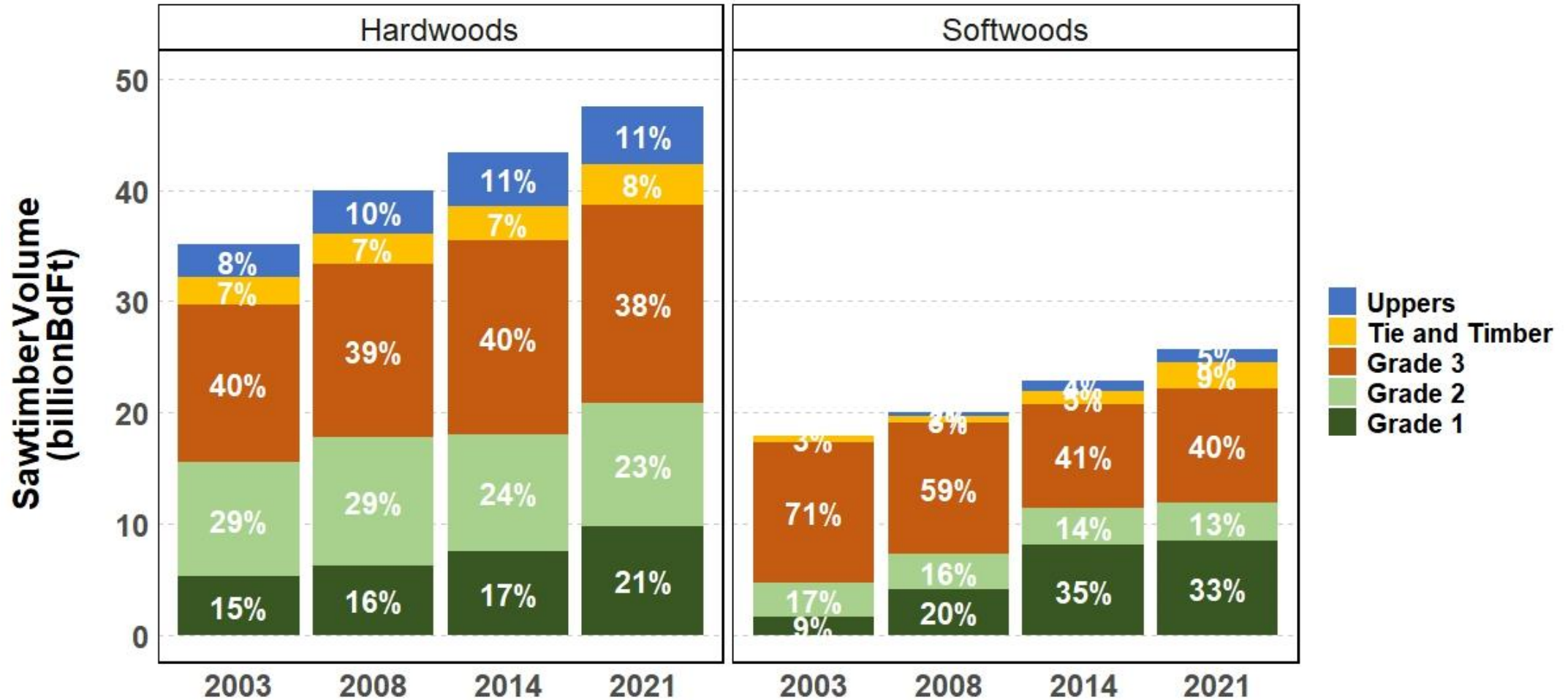


Growing Stock Volume



Merchantable, growing-stock volume (A) all Wisconsin timberland; (B) by Region
 Source: USDA Forest Inventory and Analysis data. Wisconsin, 2021

Sawtimber Trends



Removals: Species

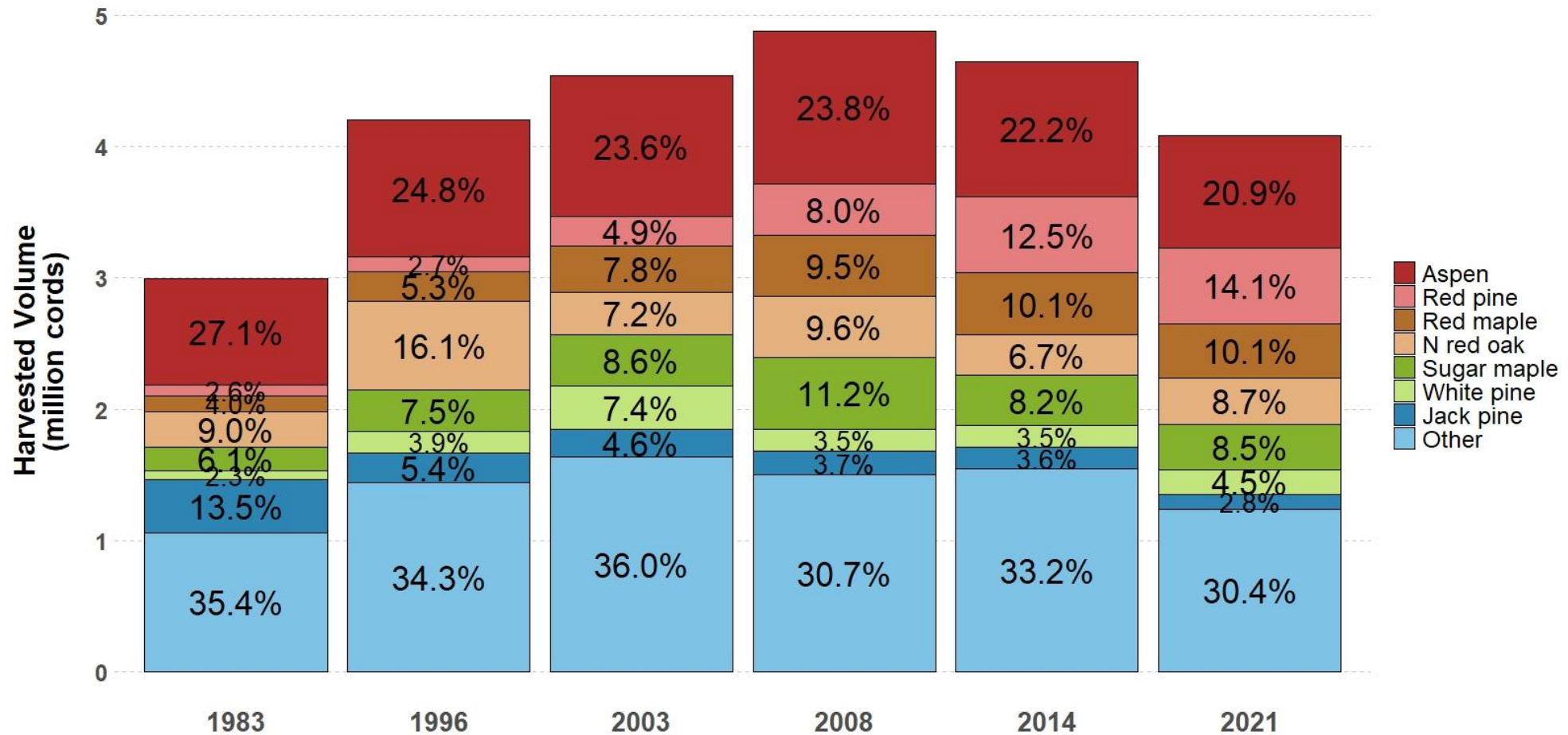
- 2021: (2015-2021) still needs to catch-up to see trends of recent mill closures
- Slight downward trend in overall removals past 15 yrs
- Certain species up, others down
 - ex: Jack pine vs red pine

Average annual removals of merchantable, growing-stock volume (thousand cords) by species group

Species	1983	1996	2003	2008	2014	2021
Aspen	811	1,044	1,072	1,162	1,032	854
Red pine	79	115	223	393	579	575
Red maple	121	222	353	463	471	414
N red oak	270	676	325	467	311	356
Sugar maple	183	313	390	546	380	347
Ash	75	130	194	157	177	191
Black & Pin Oak	75	132	144	187	266	191
White pine	68	166	335	171	164	182
Basswood	103	159	132	218	218	161
Jack pine	404	228	208	179	167	115
White oak	53	195	154	178	113	114
Minor hwd	43	163	346	141	152	111
Balsam fir	115	74	63	76	94	102
Paper birch	159	269	248	198	211	96
Black cherry	9	43	50	37	37	53
Elm	231	132	114	41	33	49
Tamarack	15	5	60	18	10	38
Hemlock	61	34	71	38	43	38
Spruce	39	33	18	91	69	36
Yellow birch	45	41	36	38	58	26
Black walnut	1	2	0	31	25	15
Minor swd	0	0	0	4	6	7
Beech	1	15	4	18	6	7
N white-cedar	36	11	4	29	28	6
Total	2,996	4,205	4,541	4,882	4,650	4,082

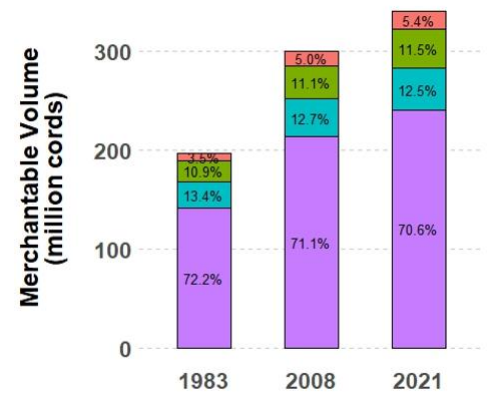
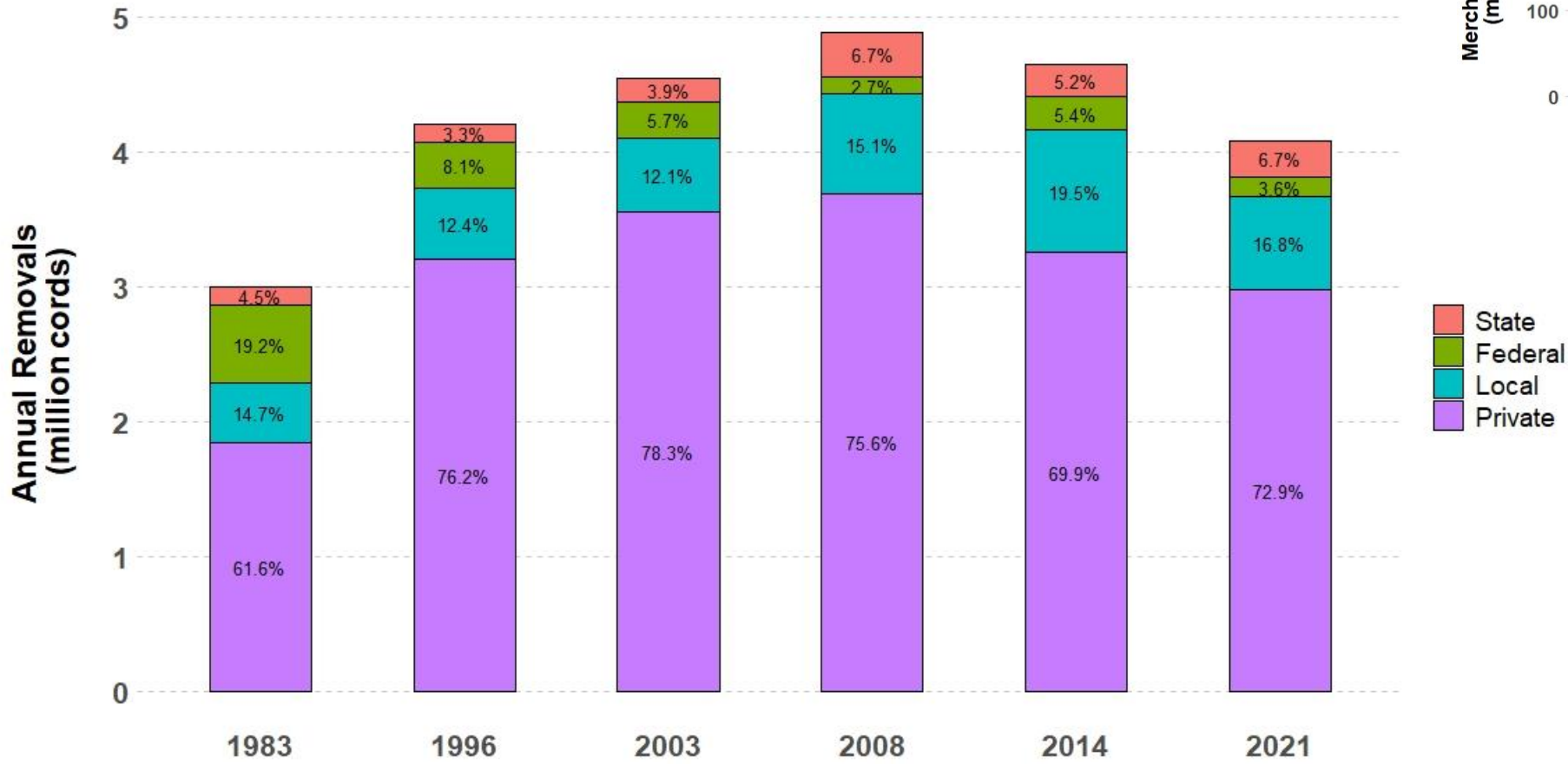
Source: USDA Forest Inventory and Analysis data. Wisconsin, multiple years

Removals: Species

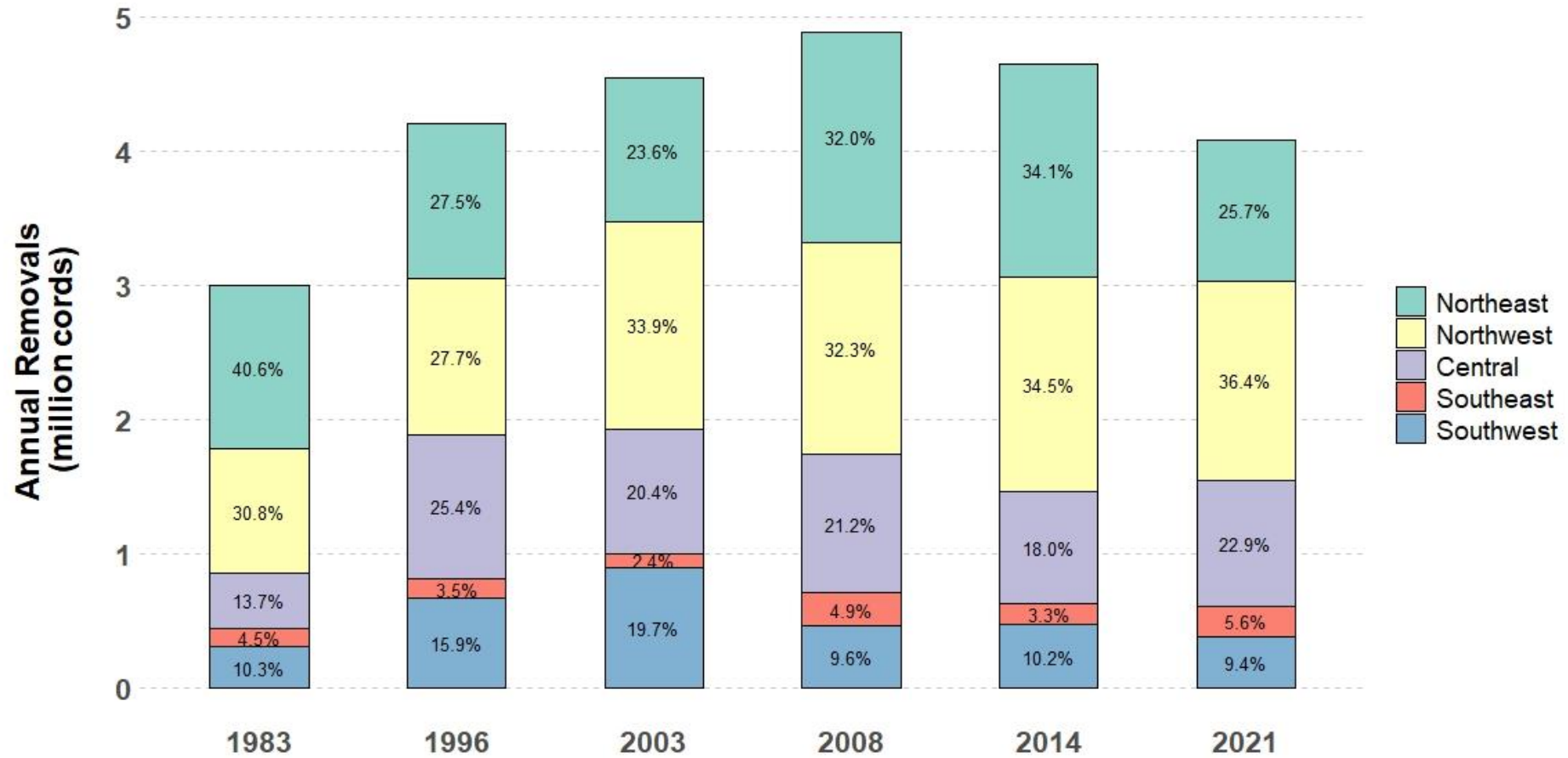


*Relative to current vol: local/priv over-rep, fed under-rep

Removal: Ownership

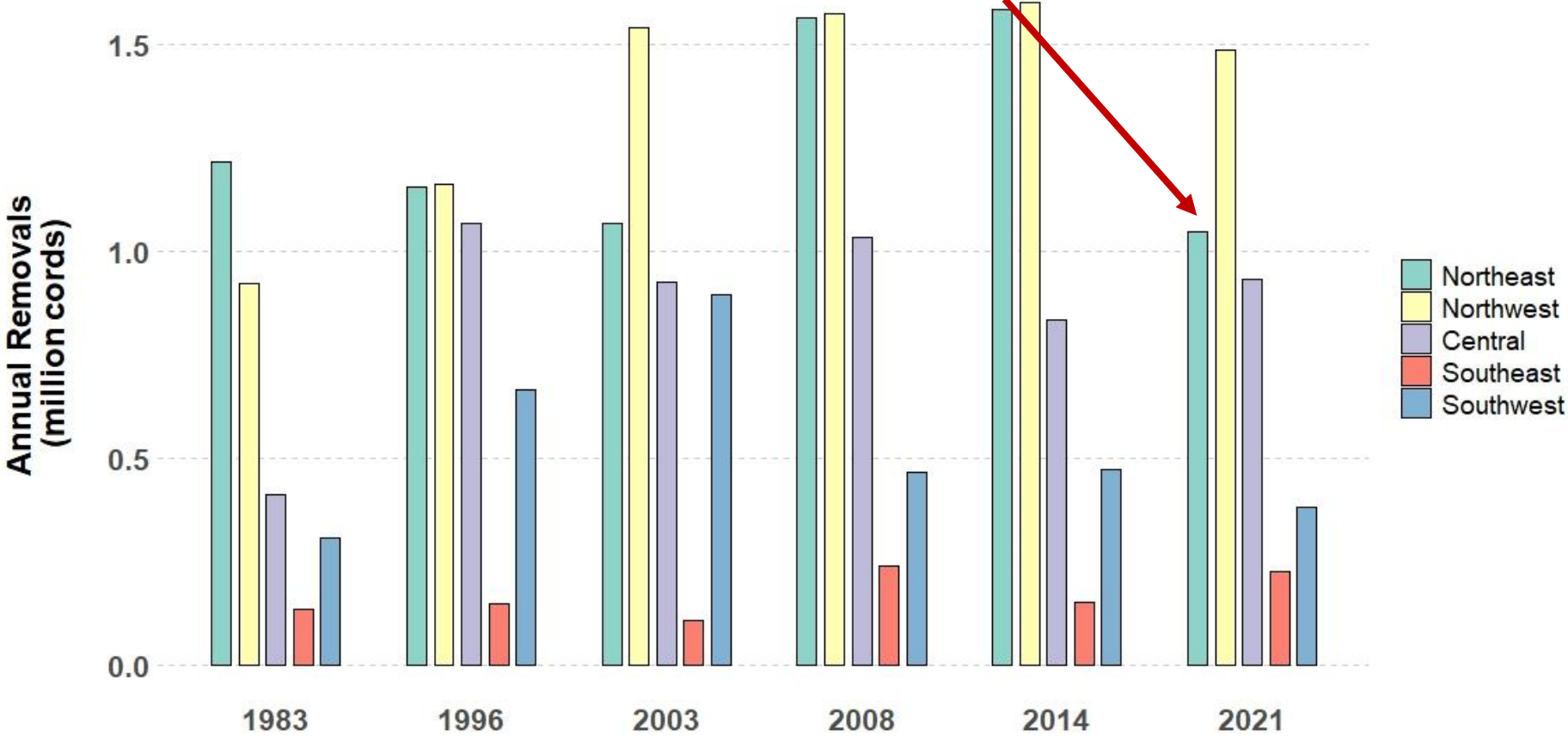


Removals: Region

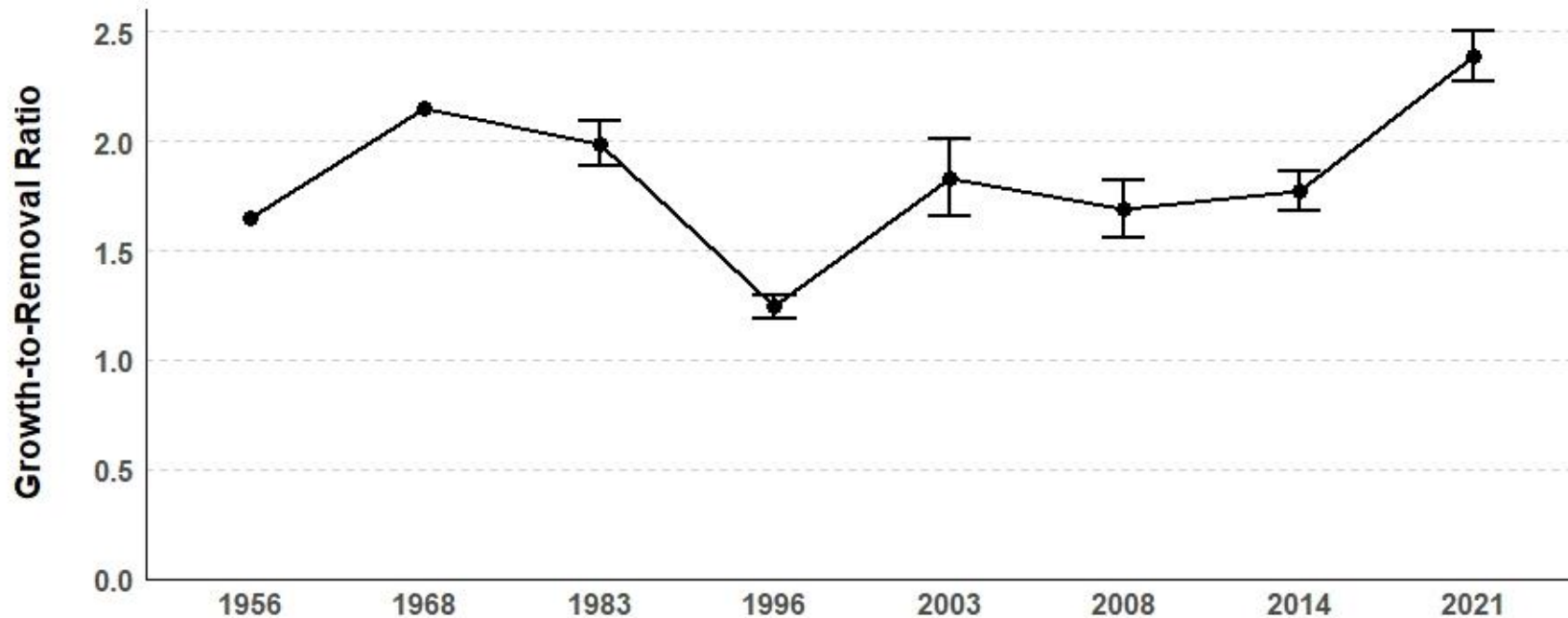


Impact of *recent* mill closures
yet to be seen in data

Removals: Region



Growth-to-Removal: a measure of sustainability

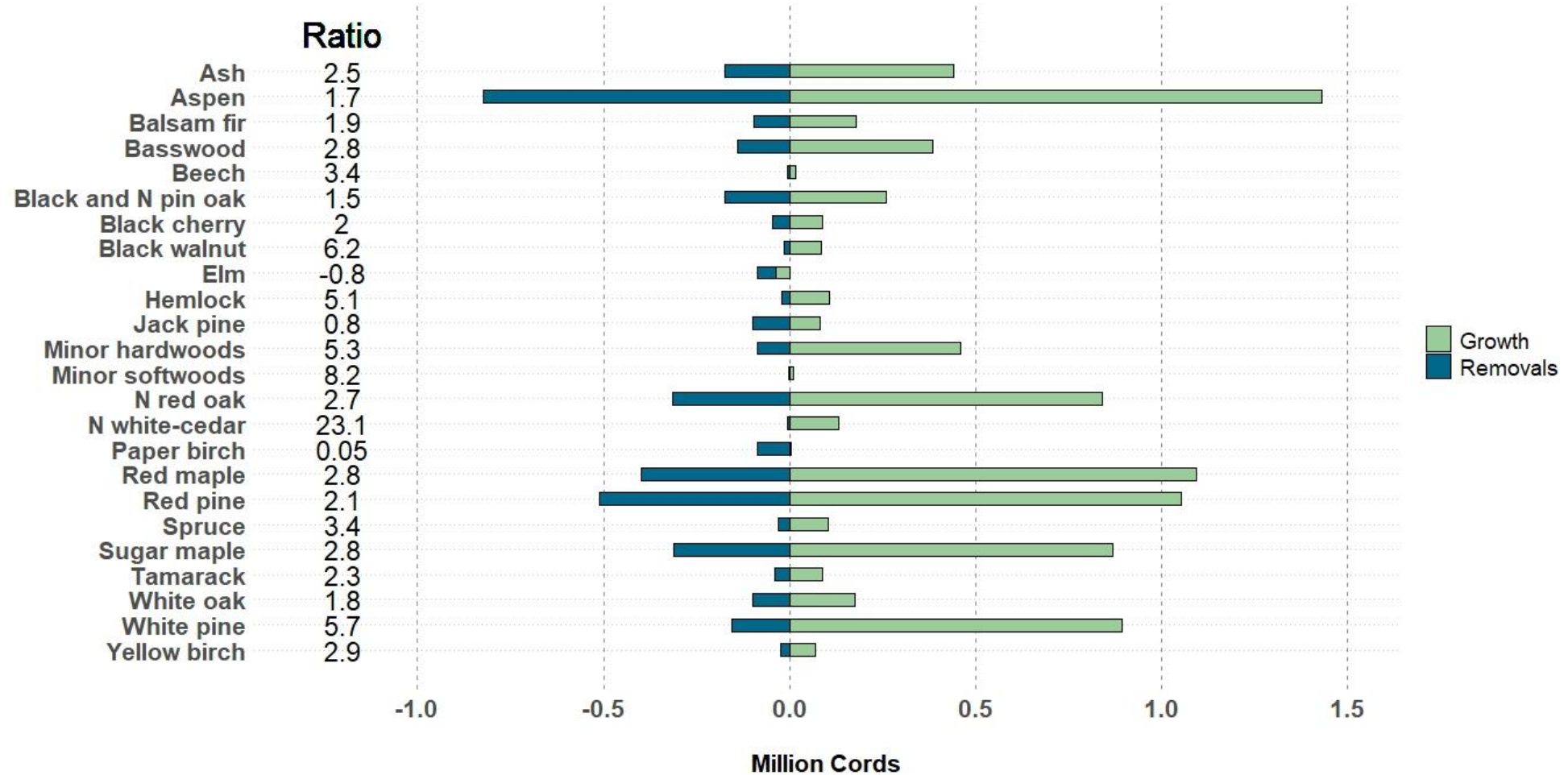


Statewide: 2.4 growth-to-removal ratio
NE: 2.47, NW: 2.12, C: 2.52, SE: 2.67, SW: 2.91

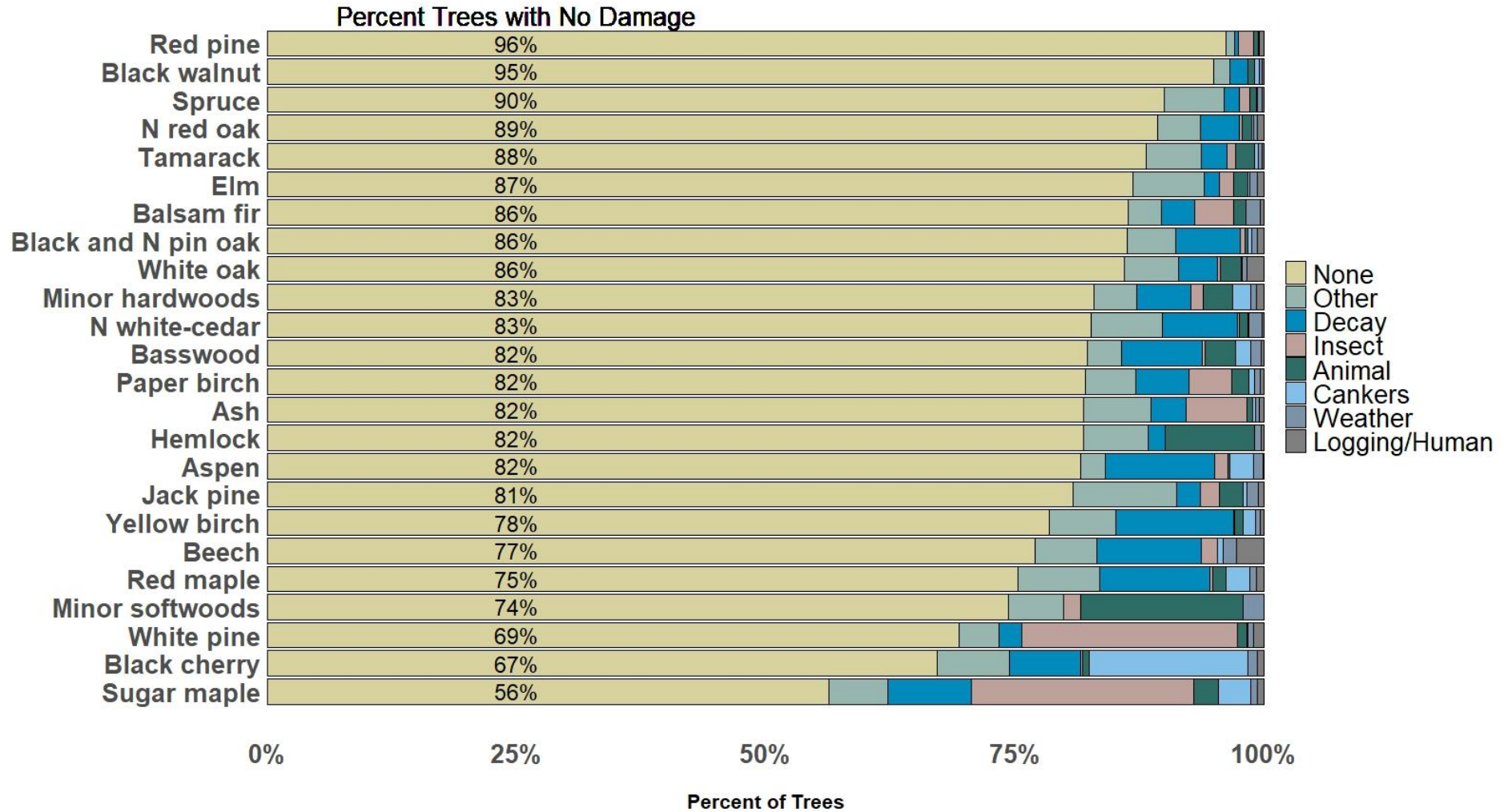
Indication of strong supply of timber, while maintaining the ecological, environmental and recreational values of Wisconsin forests

Figure 7: Trends in growth-to-removal ratio of growing stock on Wisconsin timberland
Source: Forest Inventory and Analysis, Wisconsin, multiple years; Spencer and Thorne, 1972; Stone and Thorne, 1961

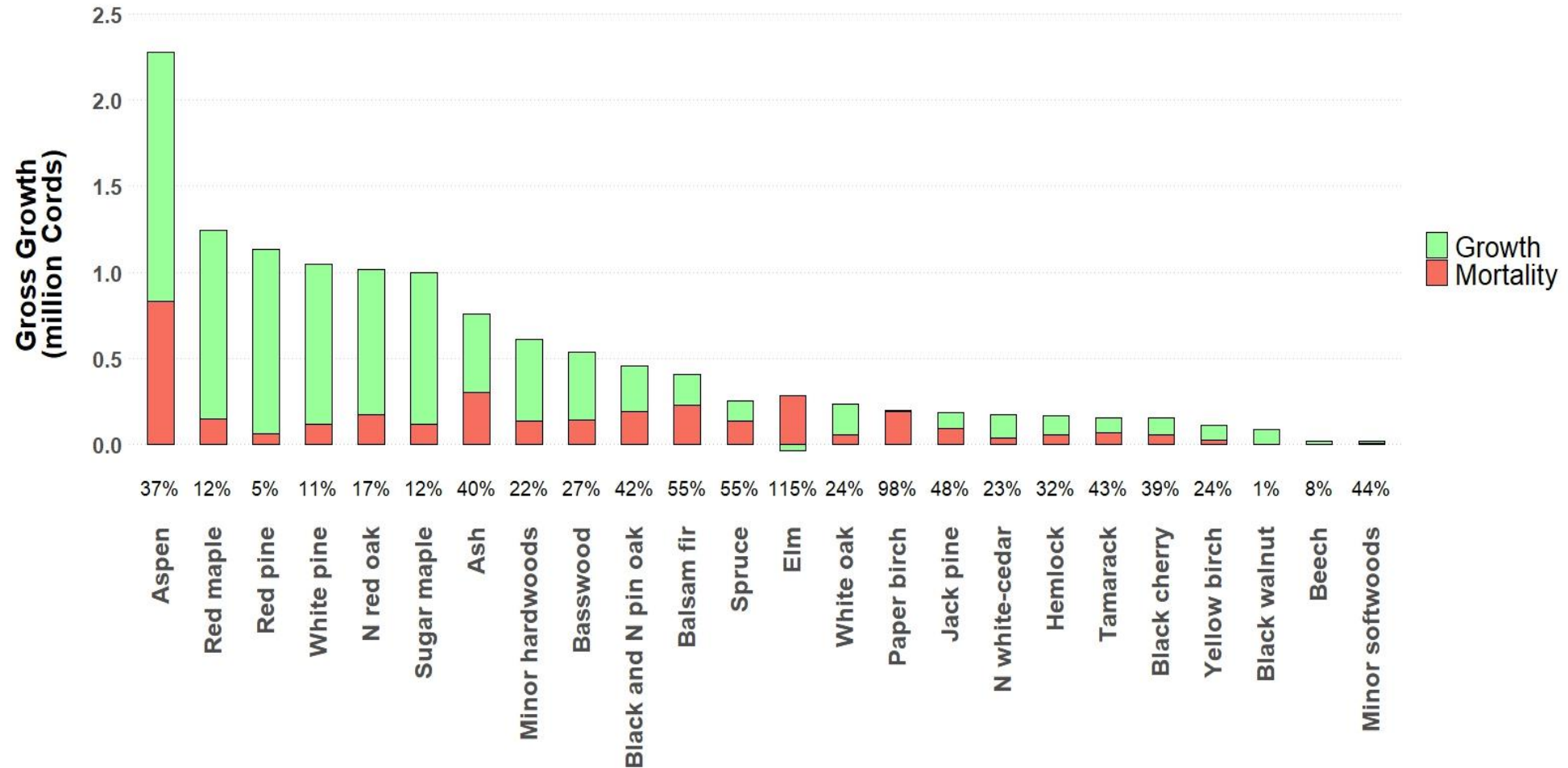
Growth-to-Removal: Species



Tree Health and Damage

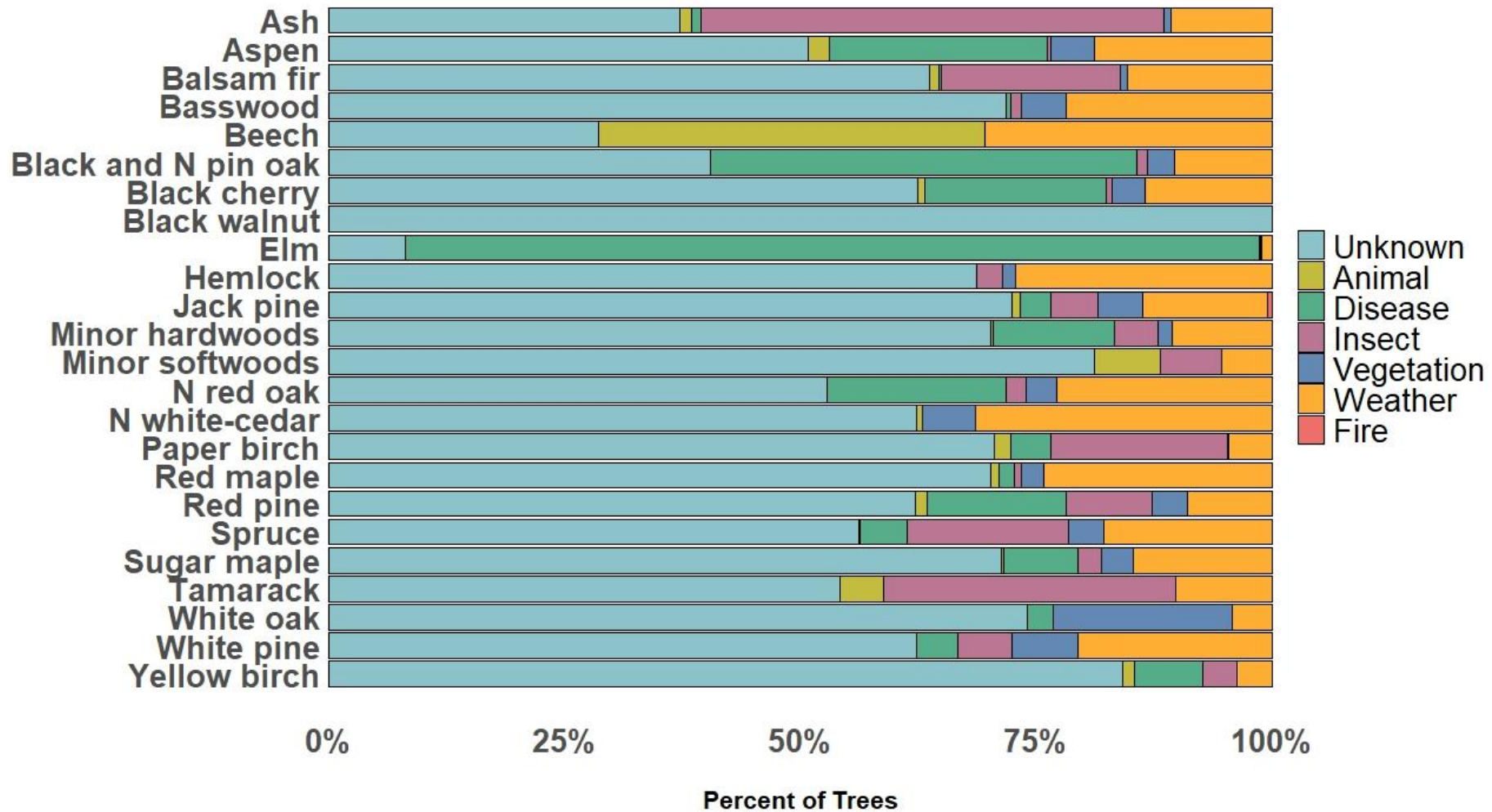


Mortality-to-Gross Growth: Current (2021)

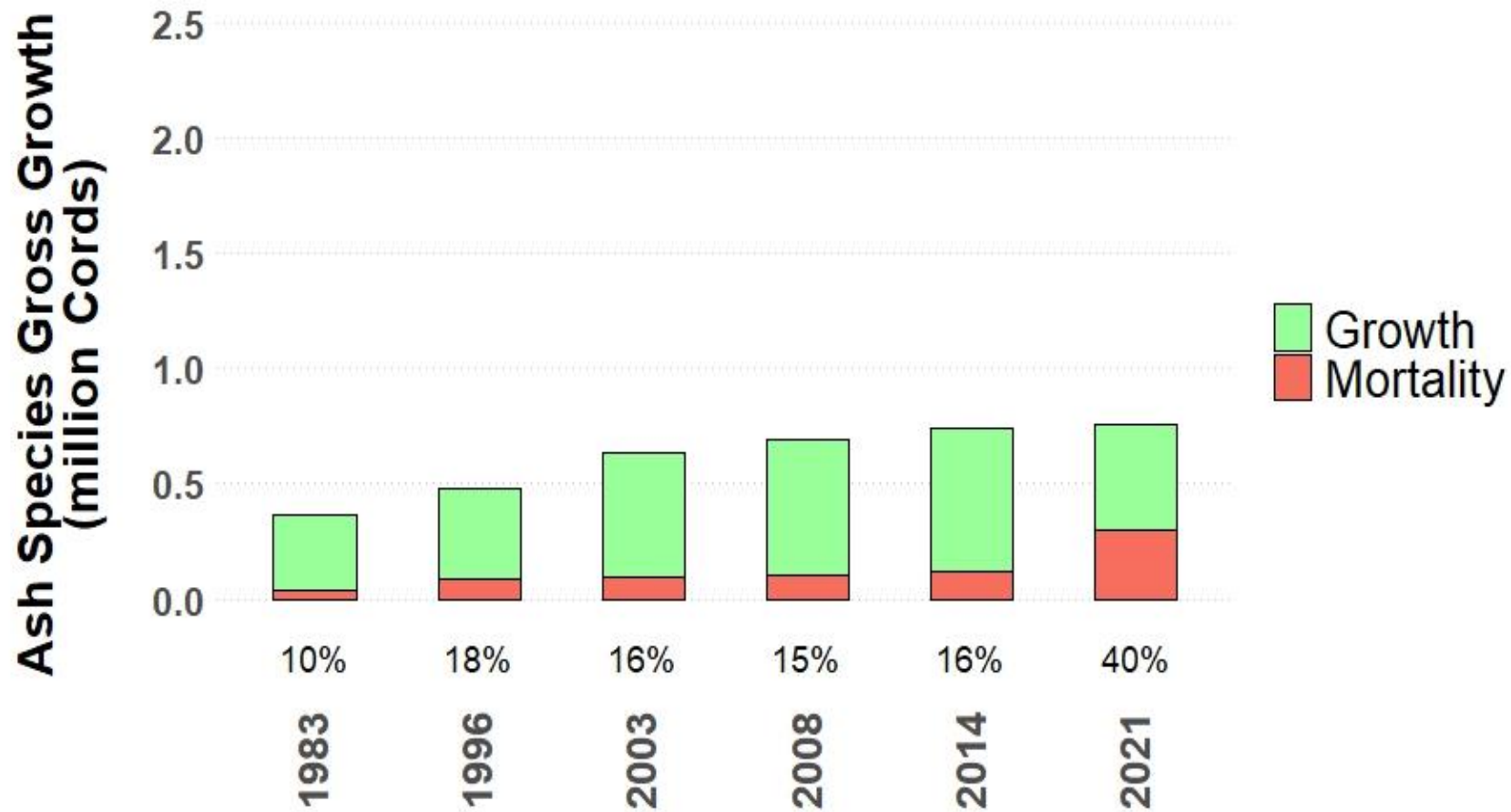


Overall ratio ~27%

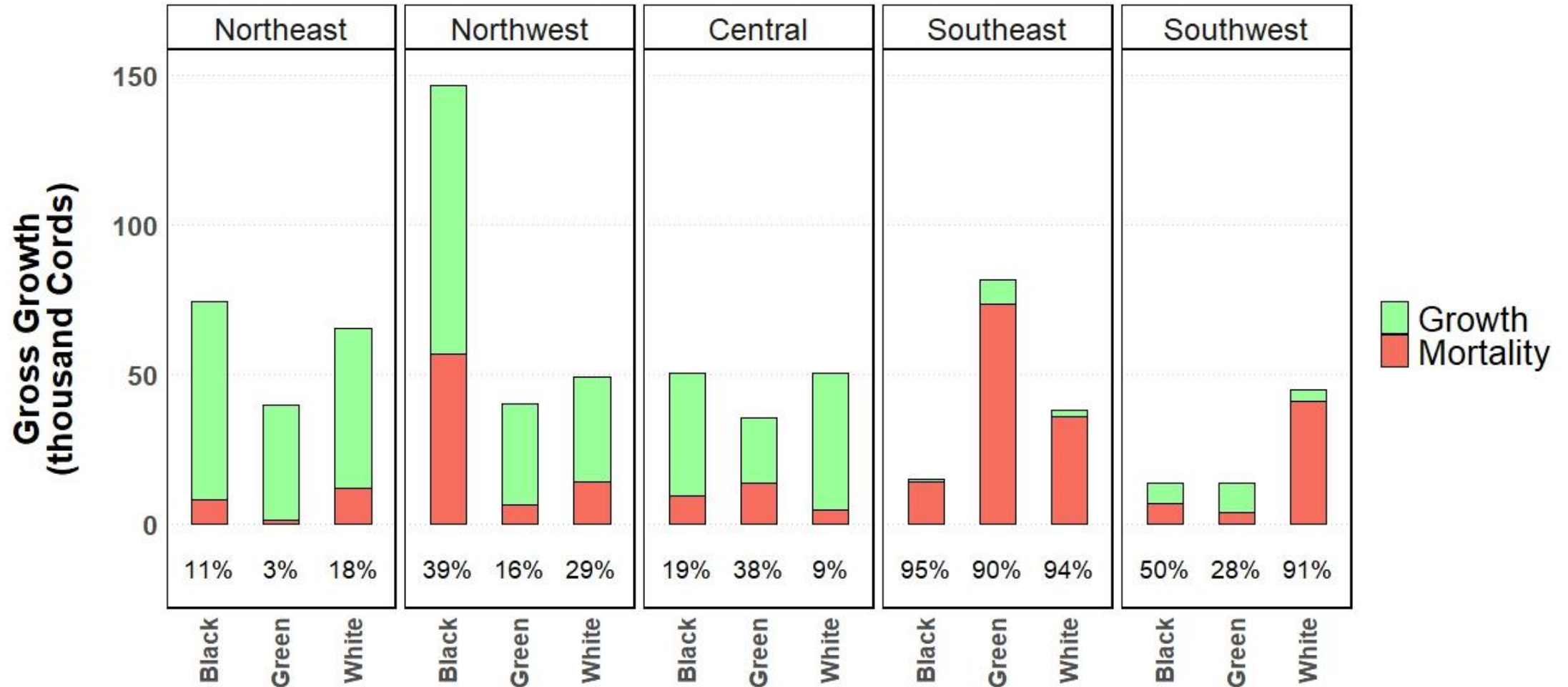
Cause of Tree Mortality



Temporal Trends in Ash Mortality



Regional Ash Mortality: Current (2021)

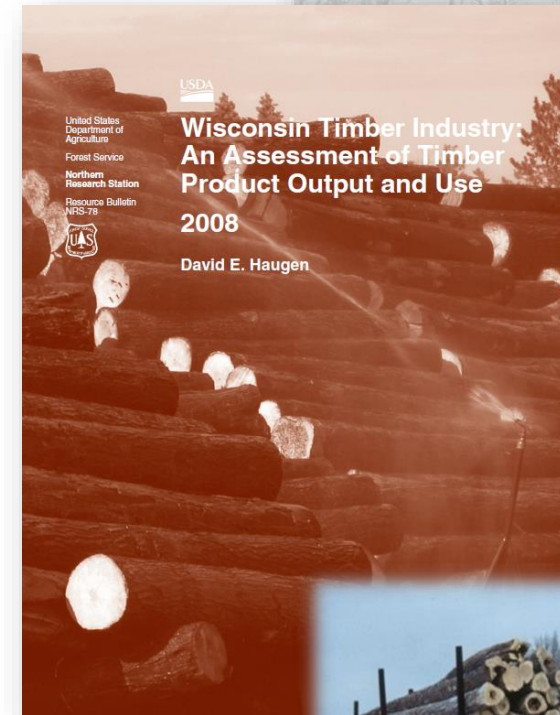


Southeast Ash Mortality Trends

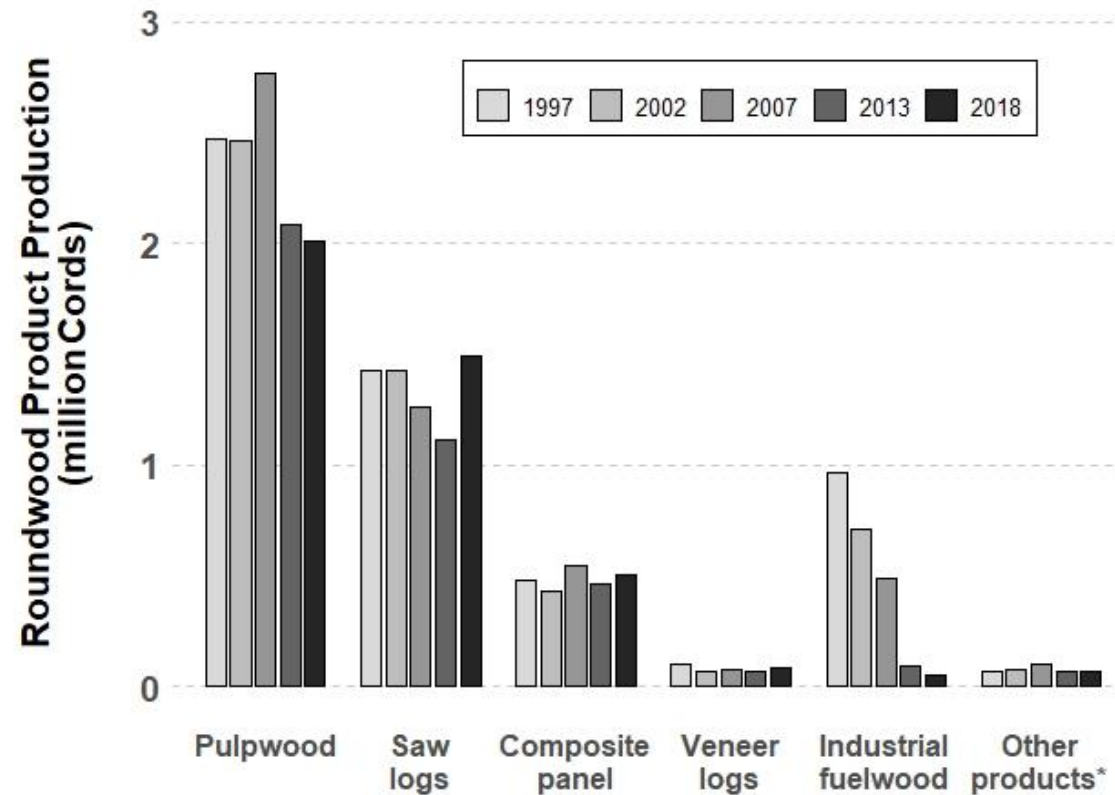


Timber Products Output (TPO)

- Current cycle surveys 25% of mills
- 312 mills on list
- Latest available data is 2018
- USFS Challenges
 - Data backlog
 - Staffing, reporting
- Potential opportunities:
 - Customize survey, in-house
 - Increase efficiency, response with digital survey



Wisconsin Timber Products

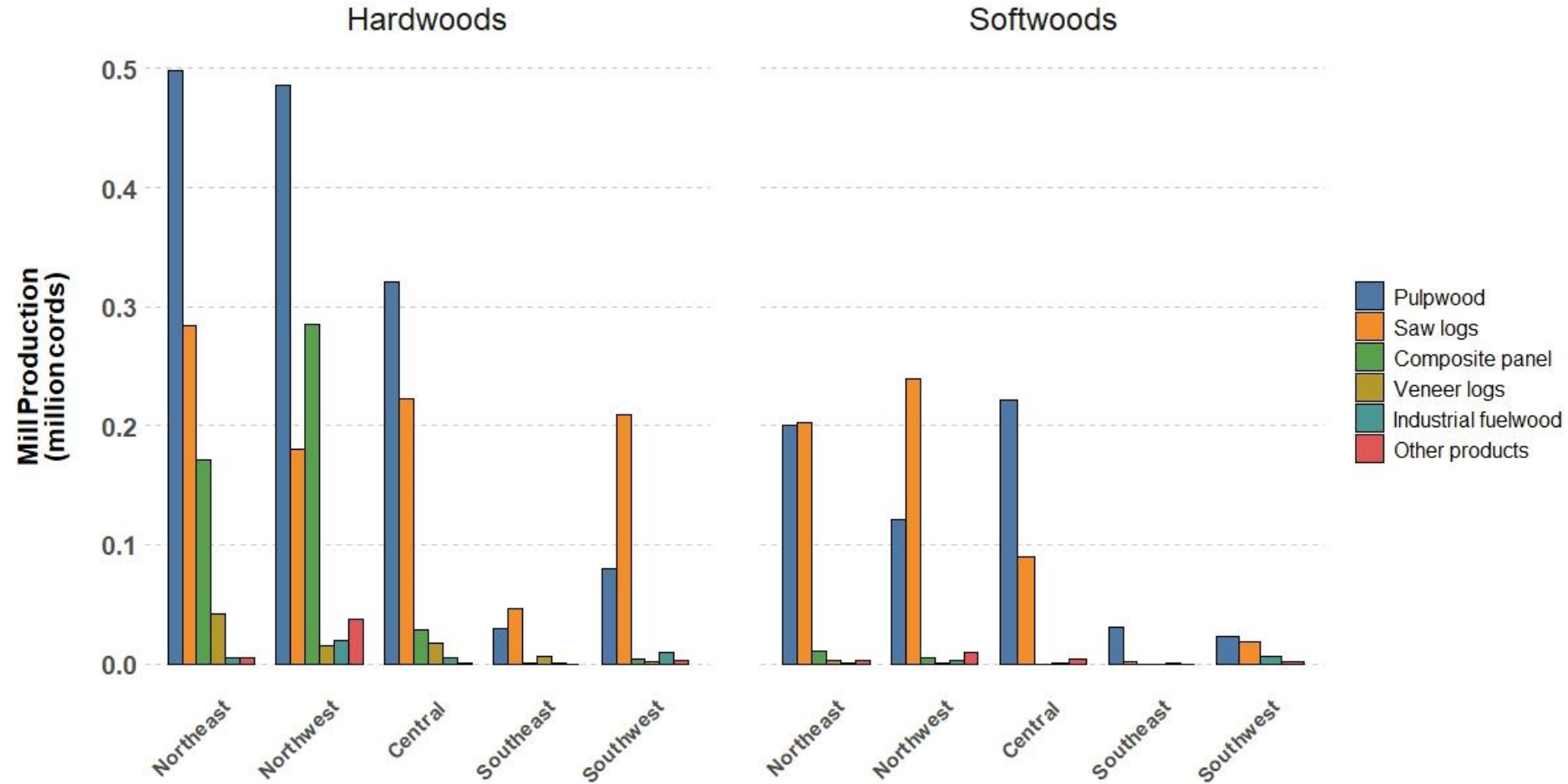


Trends in roundwood product production

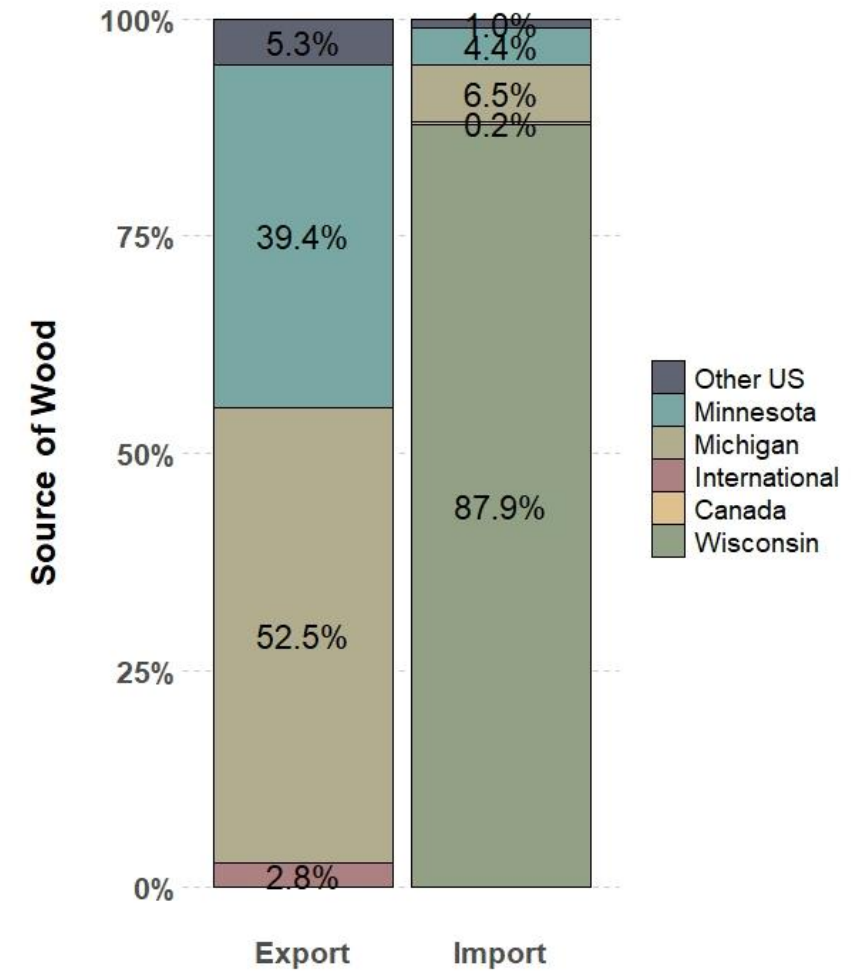
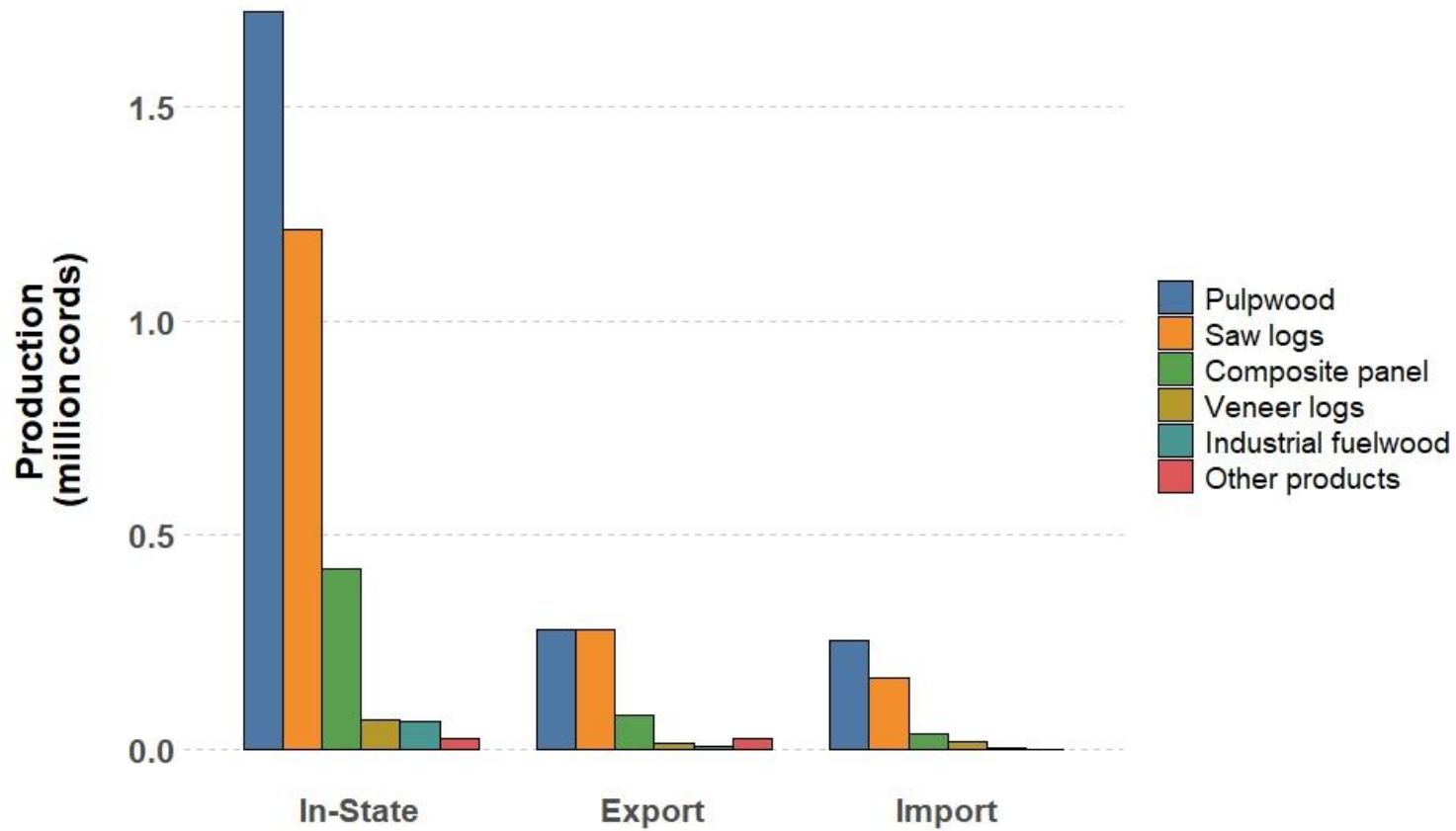
*includes posts, poles, pilings, timbers and other misc products

Source: USDA Timber Products Output, Wisconsin, multiple years

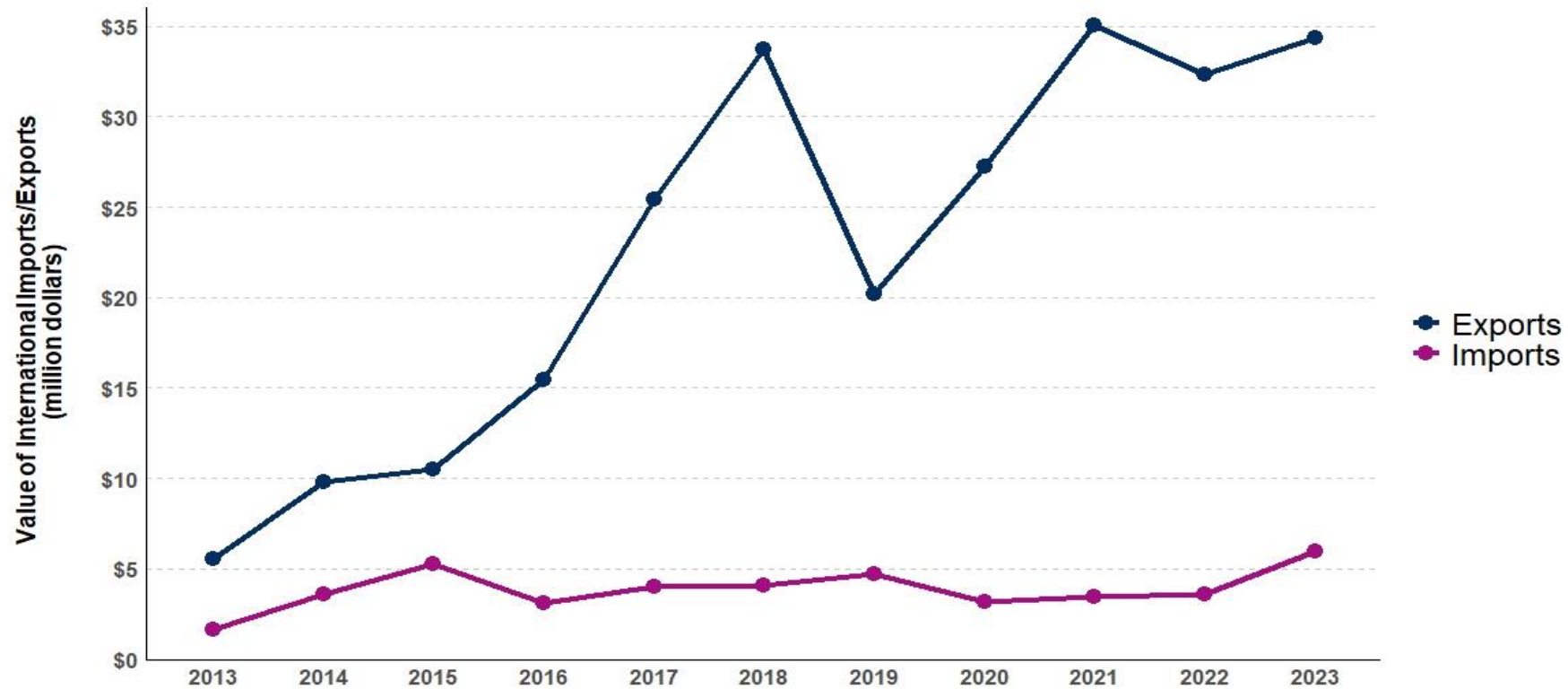
Wisconsin Timber Products



Imports/Exports

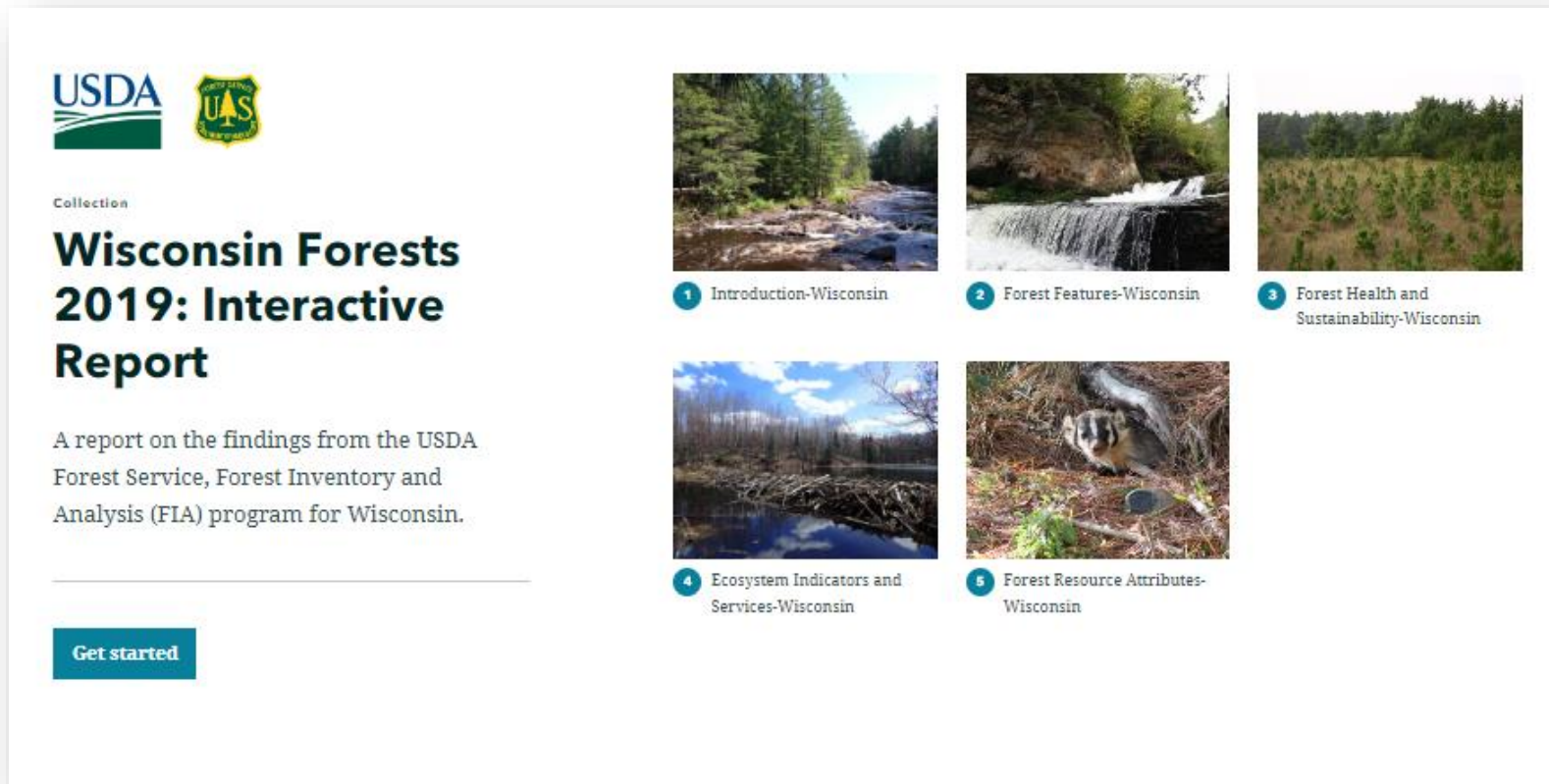


International Imports/Exports




Wisconsin trends in value of international timber imports and exports
Source: US Census Bureau

USFS FIA Interactive Report



The screenshot displays the homepage of the USFS FIA Interactive Report for Wisconsin Forests 2019. At the top left, the USDA and USFS logos are visible. Below them, the text 'Collection' is followed by the main title 'Wisconsin Forests 2019: Interactive Report'. A descriptive paragraph states: 'A report on the findings from the USDA Forest Service, Forest Inventory and Analysis (FIA) program for Wisconsin.' A blue 'Get started' button is located at the bottom left of the main content area. On the right side, there are five numbered thumbnail images with corresponding titles: 1. Introduction-Wisconsin (river in forest), 2. Forest Features-Wisconsin (waterfall), 3. Forest Health and Sustainability-Wisconsin (field of young trees), 4. Ecosystem Indicators and Services-Wisconsin (beaver dam), and 5. Forest Resource Attributes-Wisconsin (squirrel).






USDA 

Collection

Wisconsin Forests 2019: Interactive Report

A report on the findings from the USDA Forest Service, Forest Inventory and Analysis (FIA) program for Wisconsin.

[Get started](#)

-  1 Introduction-Wisconsin
-  2 Forest Features-Wisconsin
-  3 Forest Health and Sustainability-Wisconsin
-  4 Ecosystem Indicators and Services-Wisconsin
-  5 Forest Resource Attributes-Wisconsin


<https://doi.org/10.2737/NRS-RB-127-INT>

USFS TPO “One-Click Report”

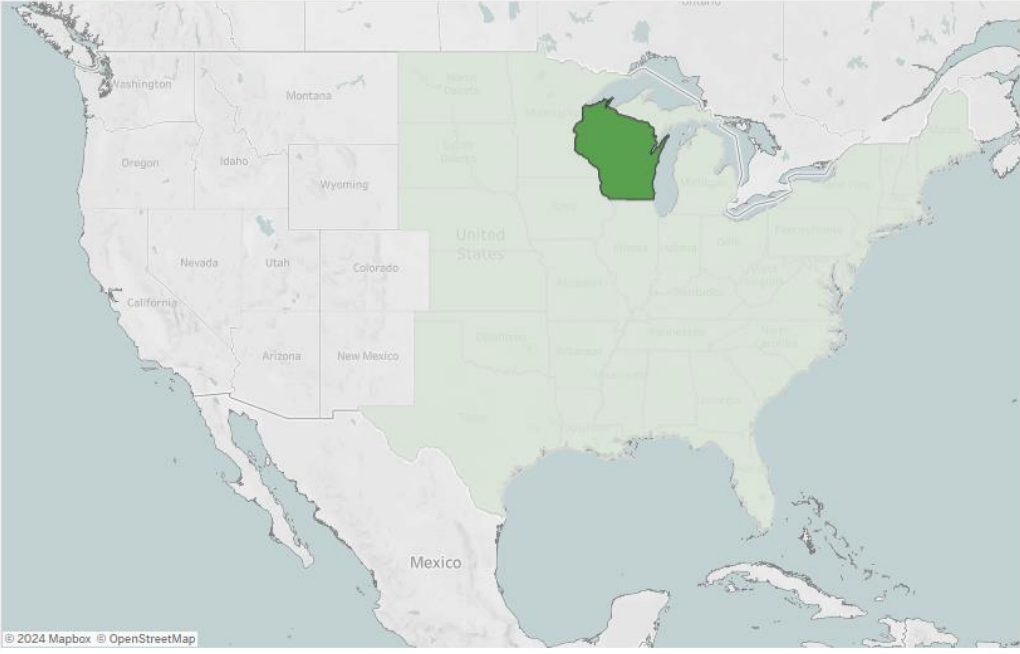
State Selection Factsheet Backpage

Forest Inventory & Analysis One-Click TPO Factsheet

The USDA Forest Service Forest Inventory & Analysis program supplies annual updates that provide a brief overview of forest resources in each state based on an inventory conducted by the FIA program in cooperation with each State forestry agency.



Pick a state of interest and the factsheet will be generated for you. Use the back button to navigate back to the map to choose another state. Use the download button to obtain your own copy of the factsheet that interests you.

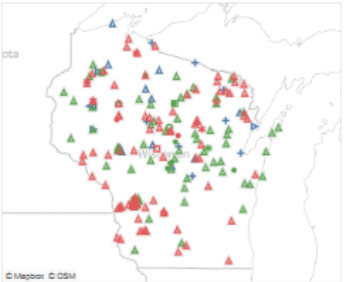


© 2024 Mapbox © OpenStreetMap

USDA United States Department of Agriculture

Timber Product Output and Use for Wisconsin, 2018

Wisconsin forests accounted for a total of 332,927 thousand cubic feet (MCF) of timber products while the forest products industry produced a total of 316,258 MCF within the State.



This resource update contains the findings of a survey conducted on a sample of all primary wood-using mills in Wisconsin. It complements the Forest Inventory and Analysis (FIA) annual inventory of volume and removals. The survey was conducted to determine the amount and source of wood receipts and annual timber product imports/exports. Only primary wood-using mills were surveyed. Primary mills are those that process roundwood in log or bolt form or as chipped roundwood. Examples of industrial roundwood products are saw logs, pulwood, veneer logs, poles, and logs used for composite board products. Mills producing products from residues generated at primary and secondary processors were not surveyed. Data used in this update were accessed from the FIA Timber Product Output database (see back page).

© Mapper © DSM

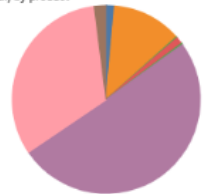
- Biomass/energy p...
- Composite Panel/...
- + Log home mill (inc...
- ◇ Misc - Concentrat...
- △ Miscellaneous mil
- ▽ Pole mill
- Pulp/Paper mill
- ◆ Residential Fuelw...
- ▲ Saw mill (includes...
- ★ Veneer/plywood mil
- Hardwood
- Hardwood/Softwood
- Softwood

Wisconsin had a total production of 332,927 MCF in 2018.

There were about 208 primary wood processing mills in the State.

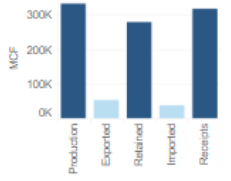
Statewide roundwood production (% of total) by product

Pulwood	47.8%	85
Saw logs	35.5%	42
Composite panel	12.0%	17
Veneer logs	2.0%	2
Bioenergy/Fuelwood	1.2%	1
Miscellaneous*	1.1%	1
Poles/Posts/Pilings	0.2%	2
House logs	0.2%	1



*Misc. includes all roundwood uses not listed

Wisconsin imported 38,186 MCF into the State and exported 84,885 MCF out of the State making them a net exporter of roundwood.



Total roundwood production

Year	Hardwood (MCF)	Softwood (MCF)
2018	~180,000	~150,000

USDA Forest Service - Forest Inventory & Analysis

<https://www.fs.usda.gov/research/products/dataandtools/tools/timber-products-output-tpo-one-click-factsheets>

CONNECT WITH US

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Forest Inventory Analyst

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608-225-0704



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@WIDNR



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/WIDNRTV



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OFF THE RECORD"

SAWLOG LEVEL SPONSORS – THANK YOU!



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The Invisible Enemy



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Fuelwood Level Sponsors contribute \$100





SFI CERTIFICATION: WHAT'S IN IT FOR YOU?

19th Annual Sustainable Forestry
Conference

Gordy Mouw

Director, Network Relations

April 17th, 2024



FOREST CERTIFICATION STANDARDS IN NORTH AMERICA

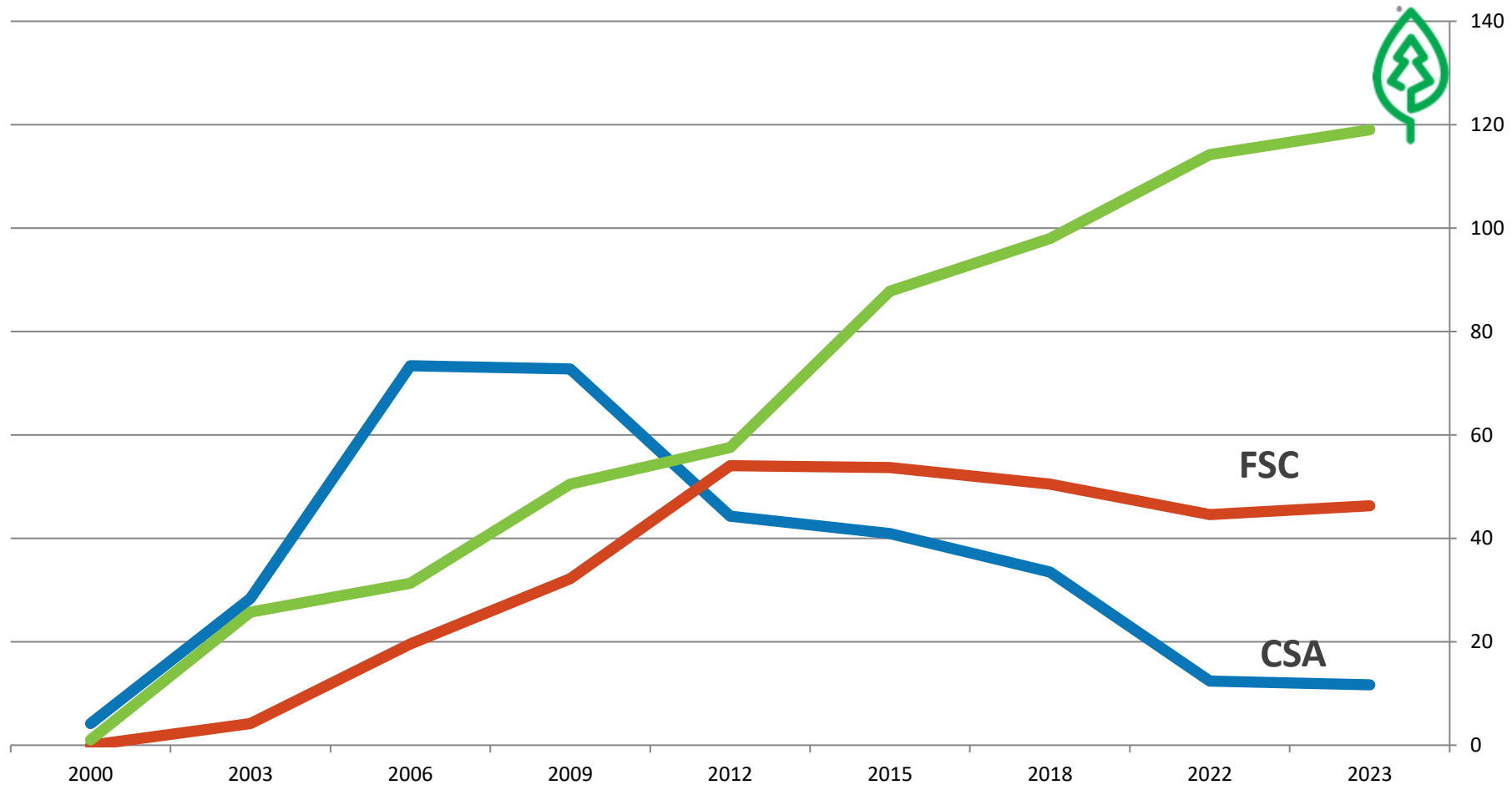
All depend on **third-party audits** to measure planning, procedures, systems and performance of on-the ground forest operations against the predetermined standard.

All four provide the basics by ensuring harvested areas are reforested, laws obeyed and no unauthorized or illegal logging.



FOREST CERTIFICATION IN CANADA

119
MILLION
HECTARES
CERTIFIED
TO SFI



SOURCES:
sfidatabase.org,
pefc.org, fsc.org

SFI ADVANCES SUSTAINABILITY THROUGH FOREST-FOCUSED COLLABORATION



STANDARDS

To advance sustainability forestry and responsible purchasing globally through certification standards and certified products



CONSERVATION

To advance credible and effective solutions to environmental challenges through the SFI standards and leadership initiatives



EDUCATION

To advance environmental education, forest literacy, and career pathways using trees and forests as windows on the world



COMMUNITY

To advance collaboration between local communities and the SFI network to increase mutual understanding of the values and benefits provided by sustainably managed forests



WHAT FOREST CERTIFICATION DELIVERS

SOCIAL, ECONOMIC AND ENVIRONMENTAL REPRESENTATION IN DECISION-MAKING



AVOIDANCE OF ILLEGAL TIMBER AND DEFORESTATION



IDENTIFICATION OF SPECIAL BIOLOGICAL, CULTURAL, HERITAGE SITES



MANAGEMENT STRATEGIES TO PROTECT SPECIES AT RISK



MANAGEMENT STRATEGIES TO MAINTAIN WILDLIFE HABITAT



SUSTAINABLE HARVEST LEVELS



PROMPT REGENERATION



THIRD PARTY ACCREDITED CERTIFICATION AUDITS



AUDIT REPORTS PUBLICLY AVAILABLE WITH CORRECTIVE ACTION CLEARLY HIGHLIGHTED



TOP THREE REASONS ORGANIZATIONS CHOOSE TO GET SFI CERTIFICATION

1

SHOWS OUR CUSTOMERS THAT WE HELP MEET THEIR SUSTAINABILITY OBJECTIVES

2

SHOWS THAT RESPONSIBLE FOREST MANAGEMENT IS IMPORTANT TO OUR CUSTOMERS

3

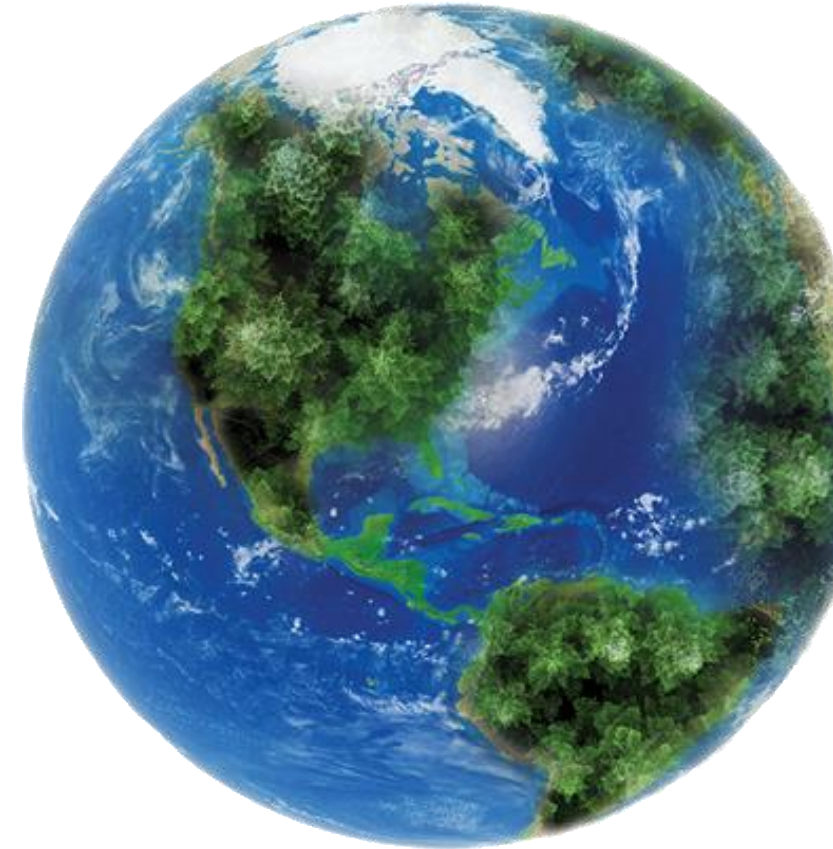
HELPS US ACHIEVE OUR SUSTAINABILITY OBJECTIVES



CONSUMERS CARE ABOUT THE ENVIRONMENT

WHEN IT COMES TO CONSUMER CHOICE AND CLIMATE CHANGE:

71% OF CONSUMERS SAY THAT
IT IS A GOOD IDEA TO
**BUY WOOD PRODUCTS FROM
SUSTAINABLY MANAGED FORESTS**
IF YOU ARE SEEKING WAYS TO
COMBAT CLIMATE CHANGE



79% OF SFI-CERTIFIED ORGANIZATIONS

REPORTED STEADY OR INCREASED DEMAND FOR SFI-CERTIFIED PRODUCTS – MORE THAN ANY OTHER FOREST CERTIFICATION STANDARD

25%

OF FORTUNE
100

COMPANIES

USED AN SFI ON-PRODUCT LABEL IN 2022





X-Large 70 lbs and up **SPLIT ELK ANTLER** 31768

KONG® Wild Antler

For dogs

KONG® Split Elk Antlers are the ideal, all-natural chewing solution. The ultra-durable chews provide long-lasting enjoyment, satisfying even the most determined chewers. KONG Antlers are odor free, mineral rich and clean teeth and gums.

- 100% all-natural and sustainable
- Naturally shed wild elk antlers
- Satisfies natural chewing instincts
- Cleans teeth and freshens breath

IMPORTANT:
Choose correctly sized antler based on your dog's weight. Not suitable for dogs under 70 lbs, or less than 6 months of age. Size up for power chewers. Always supervise use and remove antler when it's small enough to be swallowed.

KONG COMPANY
16191 Talle Mountain Pkwy.
Golden, CO 80403

CARTON MADE WITH RECYCLED PAPER AND ENERGY*

INCLUDES MADE WITH 100% COMPOSTABLE BICYCLE TIRES. SEE RECYCLEMAGIC.COM FOR DETAILS.

SUSTAINABLE FORESTRY INITIATIVE Certified Sourcing
www.sfi.org/certified
SIF-00514

USA ORIGIN

Dogs Need to Play.®

XVX2 Wild Antler Split XL

35585 31706 9
© KONG COMPANY 2022 R0622PK11

COOLMAX® EcoMade

HIKE

LARGE
WOMEN'S 10-12.5
MEN'S 9-11.5

Support & cushion in a sporty fit

Flash COOLMAX® Lightweight Crew Socks

Made in USA with imported and domestic yarns

REI CO-OP

4 21062 30007 3

SUMNER, WA 98390
TCP523.D27636

PAPER CARD

SUSTAINABLE FORESTRY INITIATIVE Certified Chain of Custody
Preventing Sustainable Forestry
www.sfi.org

26260

12 12

2.5 CARBS **85 CALS**

Michelob ULTRA

PURE GOLD

MADE WITH ORGANIC GRAINS

2.5 CARBS **85 CALS**

SUPERIOR LIGHT BEER

A SHOPPER BRAND

paperbird®

160 SHEETS

white unscented

Soft & Strong Facial Tissues

for rosy noses

160 SHEETS 2-PLY

Soft • Absorbent • Hypoallergenic

160 - 2-PLY FACIAL TISSUES - EACH SHEET 8.2 IN x 8.4 IN (20.8cm x 21.3cm)

MADE WITH RECYCLED PAPER

SUSTAINABLE FORESTRY INITIATIVE Certified Sourcing

LOGGER TRAINING



Training?



SFI Workshops



Online Training

[2024 SFI Schedule, Course Descriptions, and Registration Form \(PDF\)](#)

These workshops are brought to you in part by the Sustainable Forestry Initiative (SFI®). The SFI Program is administered by the Wisconsin SFI Implementation Committee (SIC). It is funded voluntarily by participating paper, lumber and forestry companies. The SFI program is based on the belief that responsible environmental behavior and sound business decisions can coexist to the benefit of communities, landowners, manufacturers, shareholders, customers and the environment – today and for future generations.

Becoming SFI Trained

To be considered SFI Trained as a Qualified Logging Professional (QLP) an individual must complete the following:

- 12 hours of SFI Core Curriculum – Best Management Practices (BMP) for Water Quality and Basic Core II (Endangered species, logger safety, and OSHA: employment laws and wage and hour rules.
- 4 hours (annually) of Continuing Education



ABOUT ▾

MICHIGAN ▾

PARTICIPANTS AND SUPPORTERS

EDUCATION ▾

SFI HOTLINE

RESOURCES

CONTACT US

GOOD FOR YOU. GOOD FOR OUR FORESTS.®

ANNOUNCEMENTS

To be certified as a Qualified Logger, the Core Training courses (8 hours) must be Completed.

In-person SFE courses led by MI SFI / MSU/ DNR staff

Mandatory National Review Classes (for those who completed core in 2023 the 4 hr



LOGGER + TRAINEE DATABASE

The SFI training program was developed to satisfy the wood-procurement and harvesting requirements of the many SFI-certified wood purchasing companies in Michigan. SFE training consists of two components core training (CT) and continuing education training (CE). This database can be checked by foresters and procurement staff who work for SFI-certified companies.

[FIND QUALIFIED LOGGERS](#)

LOGGER TRAINING AND EDUCATION

- Logger training and education is a core requirement in both the SFI Forest Management Standard and Fiber Sourcing Standard.
- Logger training is a very effective tool in promoting sustainable forest management and has been a key component of the SFI program since its inception.
- Loggers play a key role on the ground implementing the SFI Standards.



SFI-TRAINED PROFESSIONAL HARVESTERS

34% → 97%

96% of all fiber supplied to SFI-certified mills in 2023 was delivered by trained harvesting professionals—compared to 34% in 1995



240k RESOURCE AND HARVESTING PROFESSIONALS

have participated in training since 1995, to ensure understanding of water quality, biodiversity and other sustainable forest practice requirements

**SFI NETWORK
SUPPORTED
TRAINING FOR
9,900 LOGGERS
IN 2023**

SFI FIBER SOURCING TASK GROUP (STANDARD REVISION)

30 TASK GROUP MEMBERS

INCLUDED 7 LOGGING PROFESSIONALS

American Loggers Council
Daniel Dructor

Great Lakes Timber Professionals Association
Henry Schienebeck

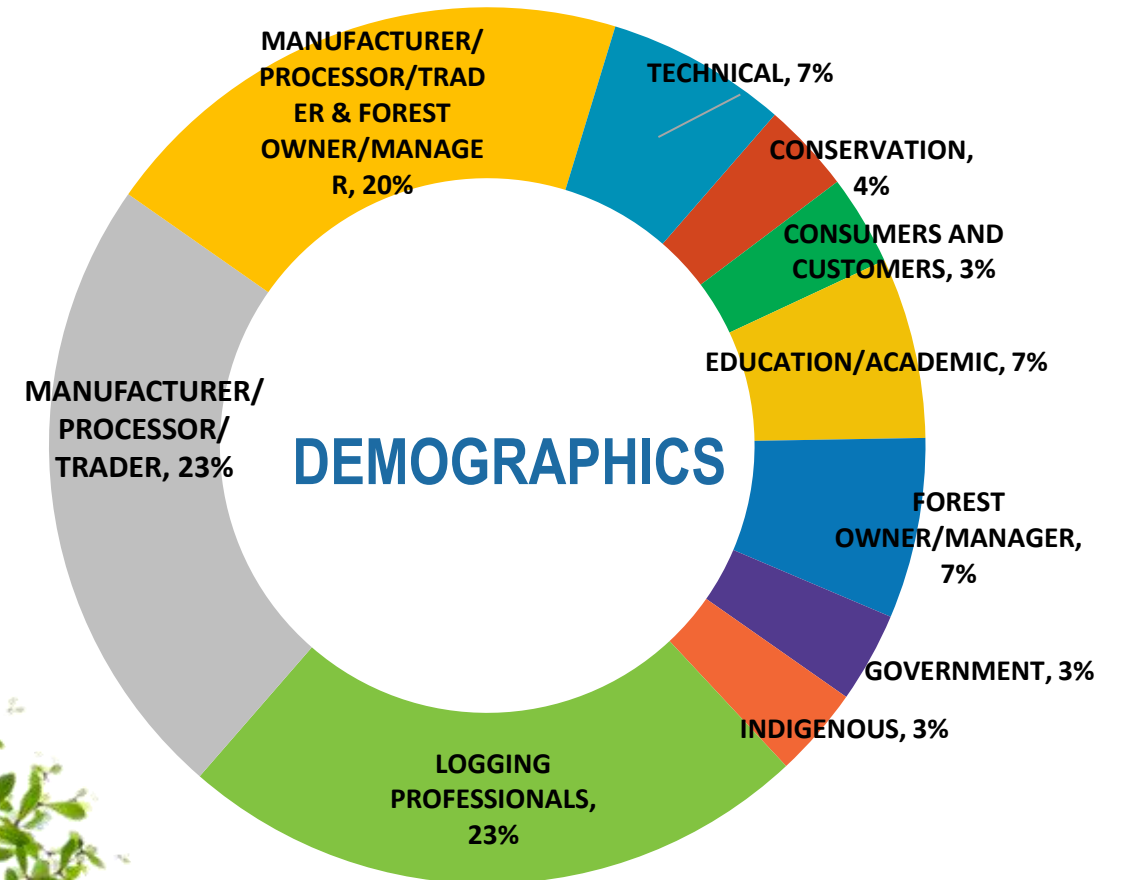
Jarvis Timber Co.
Shannon Jarvis

Gahlsdorf Logging Inc.
Jim Galsdorf

Louisiana Loggers Association
Josh Mcallister

**Michigan Association Timbermen member,
Logging Contractor, Small Forest Landowner**
Warren Suchovsky

M.A. Rigoni Inc.
Richard Schwab



LOGGER TRAINING AND USE OF TRAINED LOGGERS

FOREST MANAGEMENT STANDARD – OBJECTIVE 13 FIBER SOURCING STANDARD – OBJECTIVE 6

Performance Measure 13.1, Indicator 5:

Certified Organizations shall have written agreements for the use of qualified logging professionals or wood producers that have completed training programs and are recognized as qualified logging professionals and/or certified logging companies.

Performance Measure 13.2, Indicator 1:

Participate in or support SFI Implementation Committees to establish criteria and identify delivery mechanisms for wood producer core training courses that allow individuals to attain qualified logging professional status.



LOGGER TRAINING AND USE OF TRAINED LOGGERS

FIBER SOURCING STANDARD – OBJECTIVE 3

Performance Measure 3.1:

Certified Organizations shall promote the use of qualified logging professionals... and/or certified logging companies

Performance Measure 3.2:

Certified Organizations... shall maximize the delivery of raw materials from qualified logging professionals and/or certified logging companies

PM 3.2, Indicator 2:

Certified Organizations shall have written agreements for the use of qualified logging professionals...

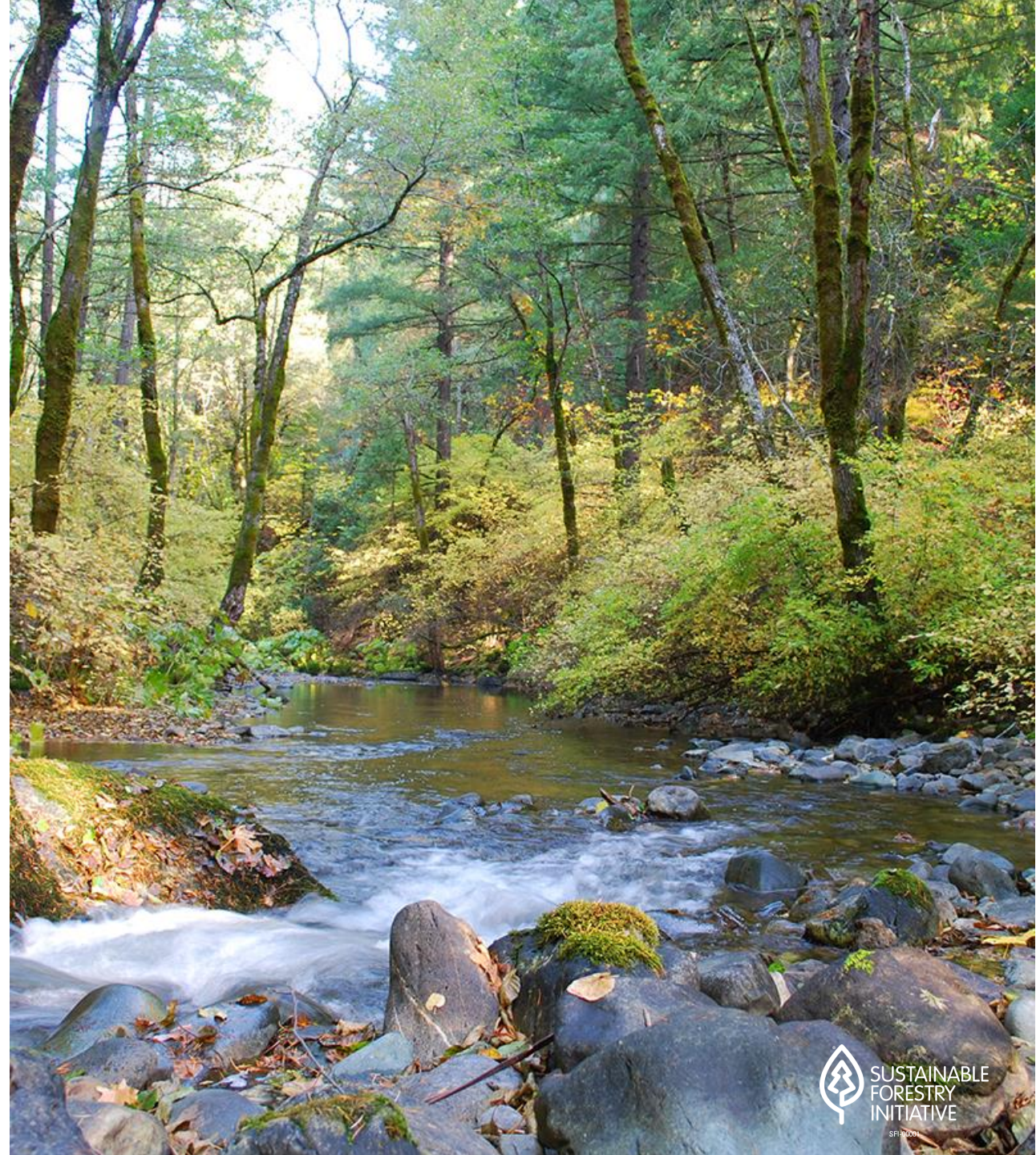


“The EPA recognizes the role of forest certification programs, including SFI, which have made important contributions to improved BMP implementation through logger training, landowner outreach, and water quality requirements.”

ENVIRONMENTAL PROTECTION AGENCY (EPA)

June 2016

Federal Register Notice of Decision
Not to Regulate Forest Roads Discharges
Under the Clean Water Act



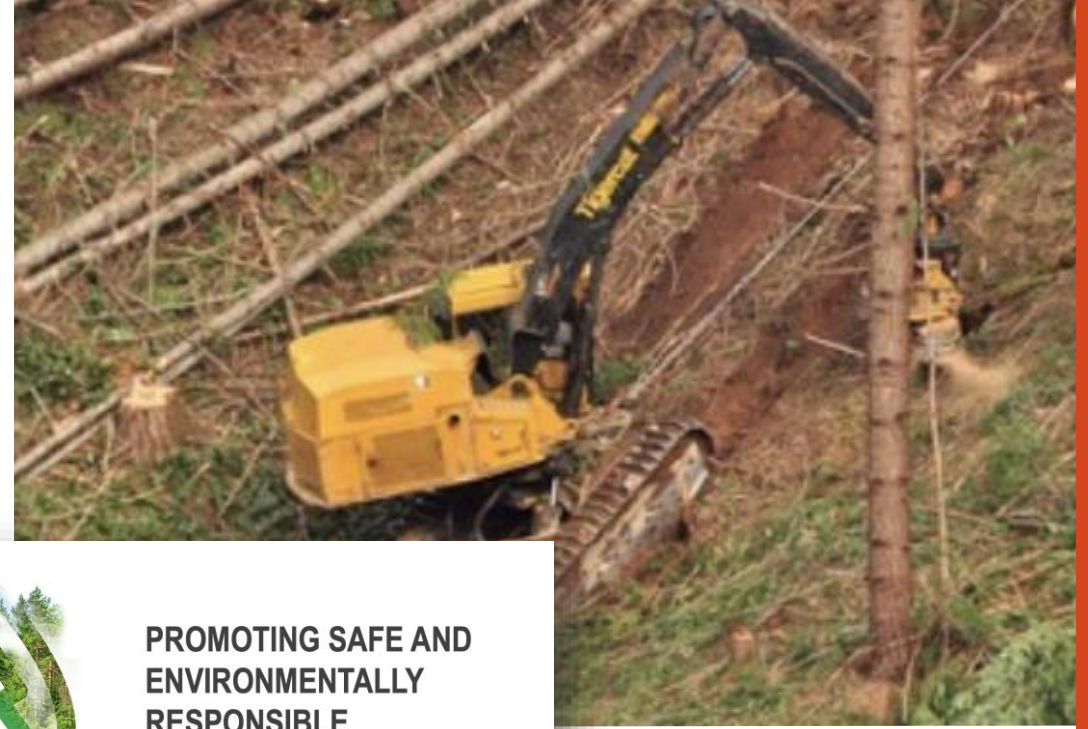


PROMOTING SAFE AND ENVIRONMENTALLY RESPONSIBLE TETHERED LOGGING

Improving harvesting practices on steep slopes in the Pacific Northwest and Intermountain West

Project Partners:

Washington State SFI Implementation Committee
Sustainable Forestry Initiative
Oregon State University College of Forestry
Washington State Department of Natural Resources



WORKFORCE DEVELOPMENT



GREEN



EXPLORING FOREST CAREERS

EDUCATOR GUIDE
COLLEGE AND CAREER PREP
LEARNERS AGED 12-25



WORKSHEET WORKING FOR FORESTS, PAGE 3



ARCHITECT

As an architect, I try to reduce the ecological footprint of buildings and homes through carefully crafted designs using sustainable and certified materials, such as wood. I want to create spaces that let people coexist with nature by bringing the outdoors indoors.



LUMBER MILL WORKER

I work in a mill that cuts logs into lumber for building materials such as framing, flooring, windows, and doors. You may be surprised to learn that my job is very high-tech: computers help me determine the best way to cut each log and how to minimize wood waste.



LOGGER

As a logger, I harvest timber from forests, which people rely on for building materials, furniture, paper, packaging, and many other products. My job is to cut the trees safely and in a way that ensures water quality and the long-term health of the forest remains.



PARK RANGER

As a park ranger, I work to educate forest visitors about the forest and to explain and enforce the rules and regulations. I help keep the visitors safe in the forest and help keep the forest safe from visitors.



CARBON MODELER

As a carbon modeler, I work with forest owners to quantify the carbon being stored or sequestered in the forest. Based on this information, owners exchange "carbon credits" with companies that emit carbon dioxide as a way to reduce overall carbon emissions and climate change effects.



PAPER MANUFACTURER

I work as a machine operator for a paper manufacturing company that makes various paper products. I run the paper-making machines and conduct quality inspections on the finished products.



WORKSHEET WORKING FOR FORESTS, PAGE 2



WILDLAND FIREFIGHTER

My job is to help protect and maintain the health of the forest by preventing, controlling, and putting out wildfires. To prepare for fire emergencies, I maintain and test firefighting equipment. I also talk to the public about ways they can help prevent wildfires.



HYDROLOGIST

I investigate water in forests by studying how it travels through the forest, into the soil, and eventually to a stream. In addition to learning about the water cycle, I try to solve questions such as how streamflow affects forests or how climate change impacts watersheds.



MILLWRIGHT

A millwright is an industrial mechanic who maintains or constructs machinery for mills, print shops, or other businesses. As a millwright, I must be familiar with different machines and how they work, and have the analytical skills necessary to fix problems.



SOCIAL MEDIA DIRECTOR

I love spreading awareness about my organization's forestry program to various audiences on social media platforms. I get to be creative when planning media campaigns related to the forest, and work with a team to share stories and build meaningful connections.



PACKAGING TECHNOLOGIST

I'm a problem solver who enjoys working with materials. As a packaging technologist for a forest products company, I am responsible for designing, developing, and manufacturing packaging for a range of products, helping to reduce ocean plastic pollution.



NATURE PHOTOGRAPHER

Forests are my shooting sets. I use various cameras, lenses, and tools to document elements of our natural world to share with clients. My work involves traveling to remote areas, where I patiently wait to capture the perfect moment depicting wildlife and nature.

THANK YOU

forests.org



SUSTAINABLE
FORESTRY
INITIATIVE

SFI 00001

SFI'S IN-RESIDENT SIC LIAISON



- Graduate of Michigan Technological University's School of Forest Resources and Environmental Science
- 20+ years experience in forest certification and logging
- Experience with many SFI Certified Orgs across the US and Canada
- Experience chairing or participating in 12 SICs

GORDY MOUW

Director, SFI Network Relations
Sustainable Forestry Initiative
Tel: 715-220-4132
Email: gordy.mouw@forests.org





SFI

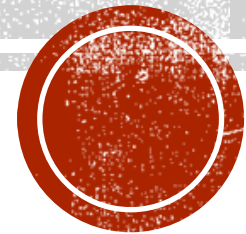


SOME OTHER THANK YOU'S!

- You...our attendees, thank you for coming!
- All of the Speakers, thanks for sharing your experience and knowledge!
- Keyes Peak Ski Lodge, thanks for hosting!
- The El Capt. Restaurant, thanks for feeding us all!
- SFC2024 Steering Committee, thanks for putting this all together!



THANK YOU!



WE HOPE TO SEE YOU IN 2025!